Where Recovery Begins | On Medicine's Leading Edge

The Official U.S. Army Magazine

Soldiers

March 2006
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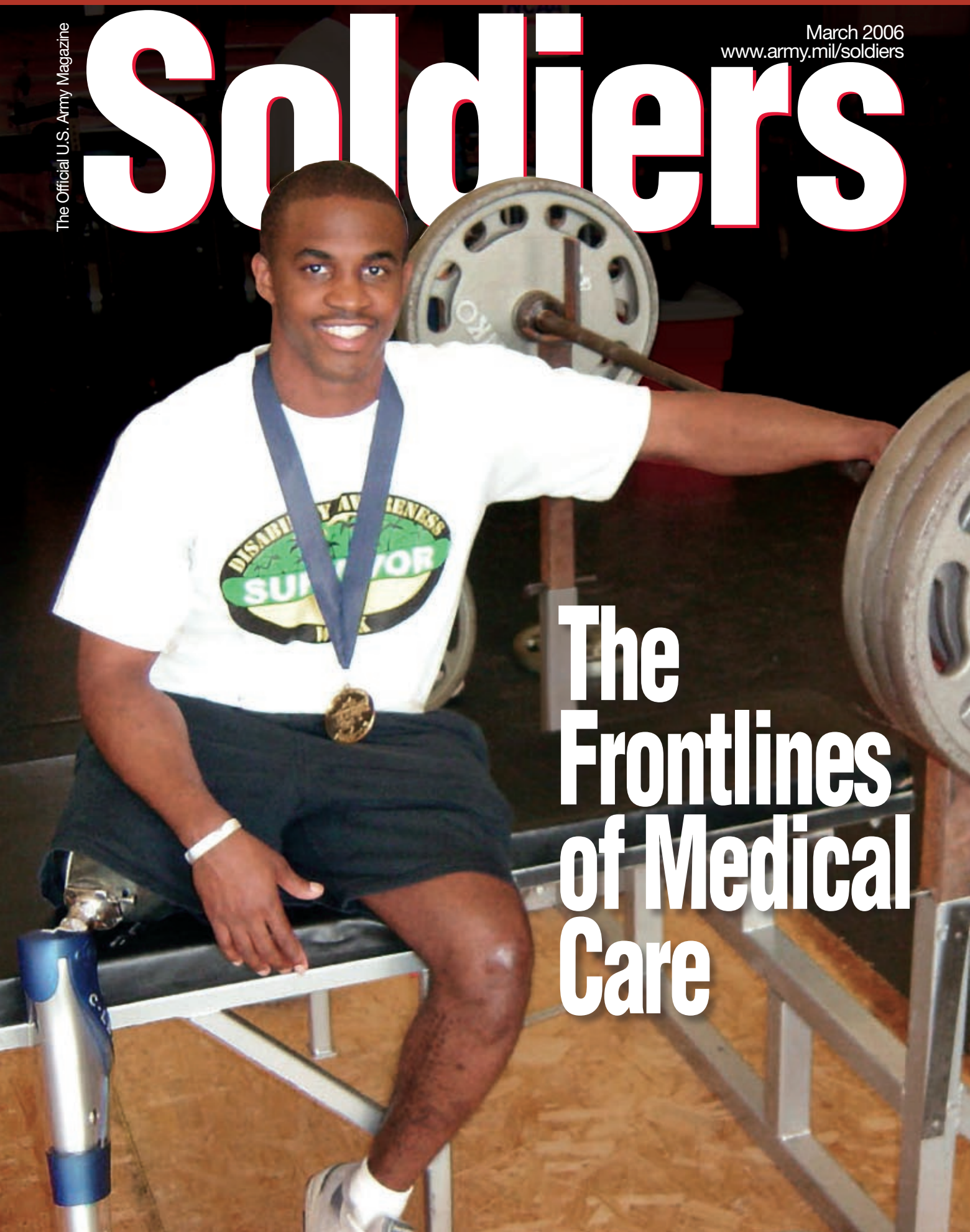

The Frontlines of Medical Care

Cover Story — Page 28
Former SGT Kortney Clemons is one of the many amputees being treated at Brooke Army Medical Center in San Antonio, Texas.
— Photo by Troy Hopkins

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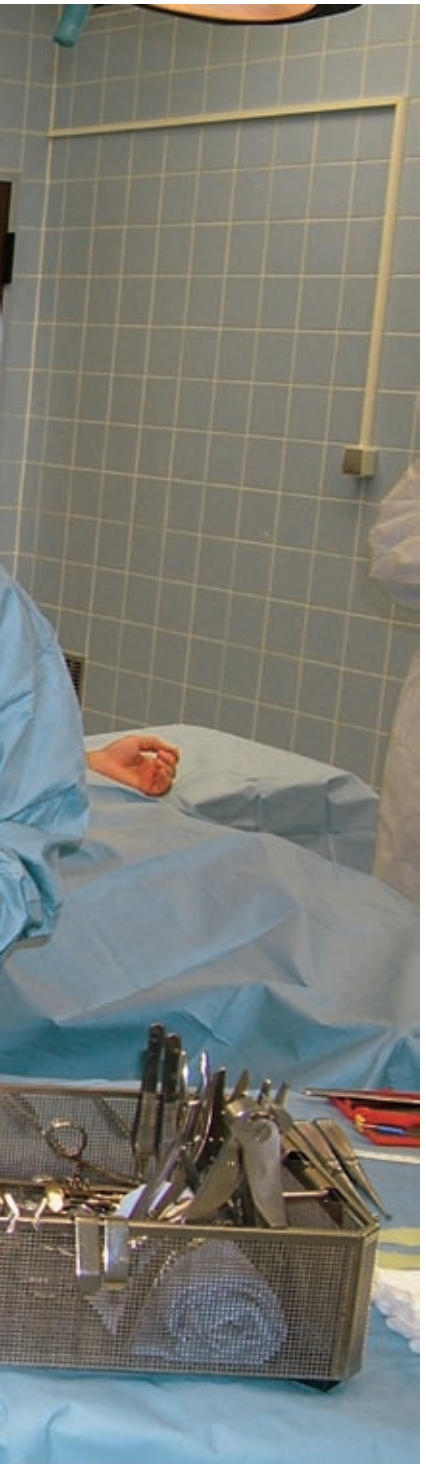

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Features

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Letter from the Editor

It's a tragic and unalterable fact that wars produce casualties, and the war on terror in which this nation is now engaged is no different.

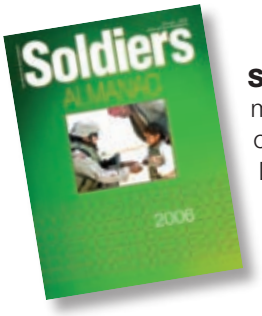
However, it is also a fact that advances in battlefield medicine ensure that wounded or injured American service members have a far better chance of survival now than at any time in history. Thanks to equally important advances in reconstructive surgical techniques, burn treatment, rehabilitative care and psychological-support services, those who once were casualties can look forward to lives as full and satisfying as human ingenuity can make them.

In this special issue of Soldiers we highlight some of the organizations and methods that are helping ensure wounded and injured service members get the world-class care they deserve.

Heike Hasenauer's "The Frontline of Care" examines the ways in which forward-deployed combat-support hospitals undertake the initial care of the wounded and injured, while in "Where Recovery Begins" Heike gives us an in-depth look at Landstuhl Regional Medical Center in Germany.

In "The Army's Burn Center" Andricka Hammonds takes us inside Brooke Army Medical Center in Texas, and in "Caring for Amputees" Nelia Schrum offers an equally important look at how the Army is helping Soldiers regain their mobility and independence after losing limbs. Janice Arenofsky continues that theme by showing us the latest developments in limb replacement in "New Hope for Amputees." Finally, in "R&R in Garmisch" Heike shows us how a quiet interlude in Bavaria helps Soldiers and their families recover from the psychological stresses of deployment and separation.

Gil High
Editor in Chief



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Soldiers

The Official U.S. Army Magazine

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2003

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Almanac Thoughts

I JUST have to tell you how much I enjoyed the Almanac issue. Great information, well presented and something I'll definitely refer to again and again.

Thanks for your effort in compiling so much information — I know it can't have been easy to pull it all together.

SFC David Provenzano, USAR
via e-mail

I AM a high school teacher and former Soldier, and I want to say how much I enjoyed the Almanac. It presents very useful information in an interesting and accessible way, and I've already used it as an in-class reference during discussions of the war against terrorism.

Keep up the good work.

J.S. Wills
via e-mail

I ENJOYED the latest Almanac, but wonder why the "Where We Are" feature on page 24 doesn't mention the Army presence in places like the Philippines and Honduras.

PFC Gary Kim
via e-mail

WE'VE received several letters and e-mails asking why we didn't include specific units or countries. The bottom line is simply that we didn't have the space — there are Soldiers in more than 100 nations, and we chose to illustrate those nations or regions where the Army presence is the largest or most important.

I NOTICED that the Iraq and Afghanistan campaign ribbons were missing from the Almanac awards pull-out.

Being an Iraq veteran myself, I was wondering why you didn't include them.

CPL David E. Boyles
via e-mail

AT the time we went to press with the January issue we did not have the official authorization-for-wear message in reference to the Afghanistan and Iraq campaign medals. When authorized, the Afghanistan Campaign Medal is worn, in order of precedence, after the Kosovo Campaign Medal and before the Iraq Campaign Medal. The Iraq Campaign Medal is worn after the Afghanistan Campaign Medal and before the Global War on Terrorism Expeditionary Medal.

Calendar Comments

MY husband is active-duty Army, and I am proud to display my copy of the 2006 calendar at my place of employment. The pictures are excellent, and very moving.

However, I was disappointed that you did not include a single female Soldier in any of the images. Why is that?

Mitzi Garner
via e-mail

ACTUALLY, there are female Soldiers in two of the photos — enlistees in July and active-duty women assigned to the Multinational Force and Observers in September.

I ENJOYED the December calendar issue, and my favorite section is the time-zone chart. My wife is deployed in Iraq, my brother is in Afghanistan and I have cousins stationed in Japan and Alaska; in some strange way, knowing what time it is where they all are helps keep them a little closer.

Dennis Haliburton
via e-mail

Lewis and Clark

THANKS to Steve Harding for the interesting November article about Lewis and Clark's arrival on the Pacific Coast.

Americans tend to forget that much of the exploration of this great land was undertaken by Soldiers, and that they faced incredible hardships as they explored and mapped the wilderness.

Thanks for reminding us of what it took to expand this country "from sea to shining sea."

MAJ Tessa N. Marlowe
via e-mail

WHILE I enjoyed reading "To the Sea: Lewis and Clark Reach the Pacific" in the November issue, I wondered why the article didn't mention the fact that Americans had visited the mouth of the Columbia River long before Lewis and Clark reached the area.

Americans first arrived in the region aboard ships — whalers and merchants sailing primarily from East Coast ports. The sailors had long traded with the local native tribes, as had British and other Europeans before them.

I don't mean to diminish the accomplishments of Lewis and Clark, but I think it's important to give credit where credit is due — and in this case that credit goes to sailors!.

PH3 Jim Nalton, USN
via e-mail

Explosions in Paradise

AS a native Hawaiian and a retired service member, I enjoyed "Explosions in Paradise," the October story about the clean up of unexploded ordnance on the Big Island.

It's no secret that some locals oppose the military's presence here in Hawaii, but I think the article showed that the Army is making a real effort to correct the environmental mistakes of World War II.

Michael Wong
via e-mail

IN our February interview with Secretary of the Army Francis Harvey we inadvertently switched the photo captions on pages 10 and 11. We apologize for any confusion this might have caused.

Soldiers values your opinion

To comment, keep your remarks to under 150 words, include your name, rank and address, and send them to:

Mail Call, Soldiers,
9325 Gunston Road, Ste. S108,
Fort Belvoir, VA 22060-5581,
or e-mail: ***soldiers@belvoir.army.mil***

Iraq

Soldiers of the 2nd Battalion, 1st Infantry Regiment, provide security as other members of their unit interrogate Iraqi men during a patrol in Rawah.

— LCpl Shane S. Keller USMC

New Orleans, La.

Workers under contract to the U.S. Army Corps of Engineers use heavy equipment to clear trees killed by flooding caused by Hurricane Katrina.

— Photo by F. T. Eyre

Pakistan

CPT Nanette Gegontoca of the 212th Mobile Army Surgical Hospital administers a vaccine to a Pakistani child at the Muslim Public School in Muzaffarabad.

— Photo by A1C Barry Loo, USAF

Djibouti

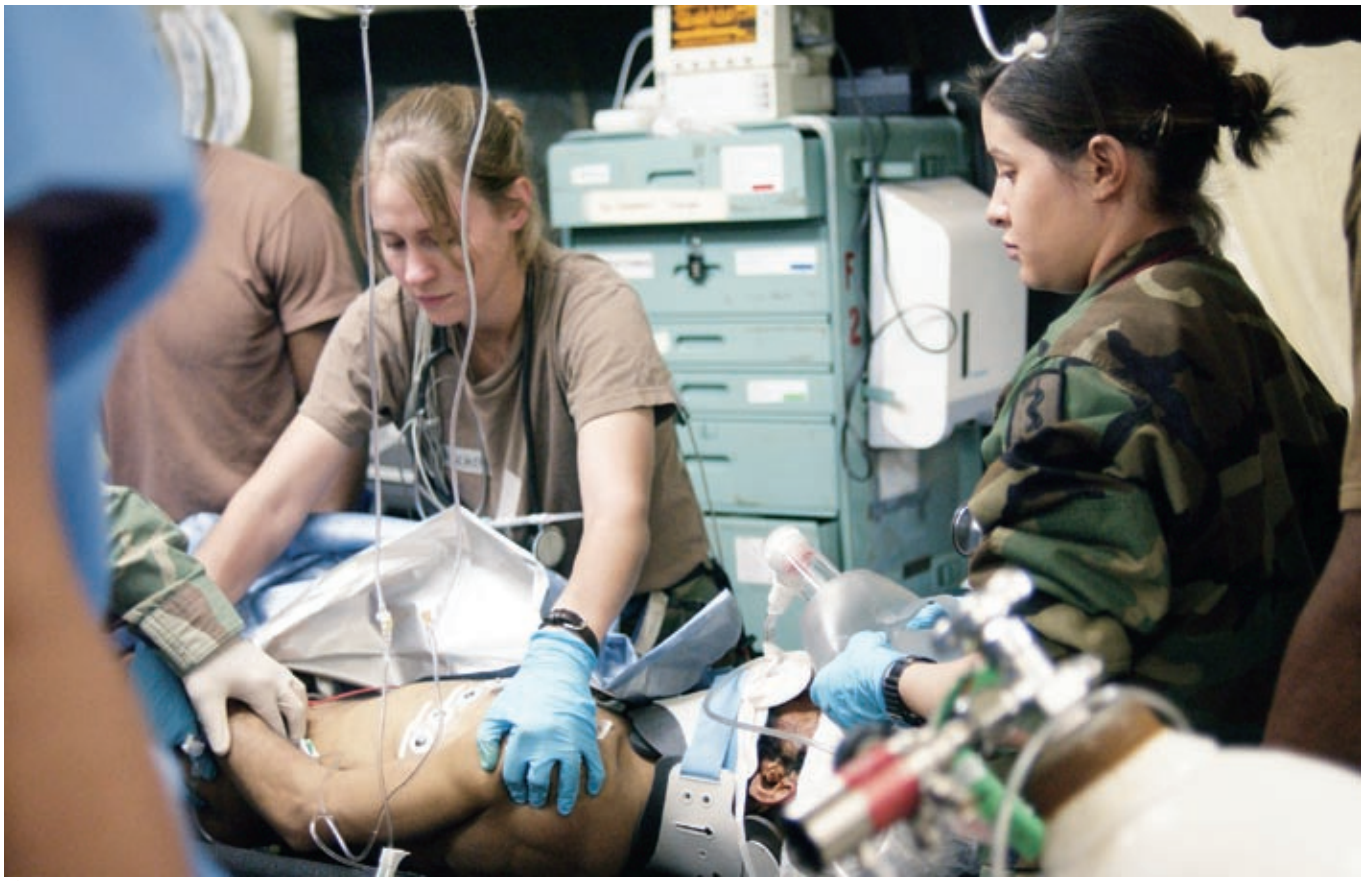
SGT Michael Mateo provides security on a small boat for U.S. Navy Lt. Timothy Sommers and Djiboutian crew members as they motor out to meet the Army logistic support vessel *SP4 James A. Loux* during its stop in the Port of Djibouti.

— Photo by Staff Sgt. Stephen Schester, USAF

Iraq

An Iraqi woman leaves with her grandaughter after being checked by a military doctor in Almeshahama.

— Photo by SSG Kevin L. Moses Sr.



Pakistan

2LT Kristy Bischoff lifts a patient while SPC Heather Esplana assists with a patient's respiration at the 212th MASH in Muzaffarabad.

— Photo by A1C Barry Loo, USAF

Landstuhl Regional Medical Center — the Department of Defense's premier medical facility in Europe — provides care for service members wounded in Iraq and Afghanistan.

Where Recover

Story and Photos by Heike Hasenauer

SPC Todd Goodman

y Begins

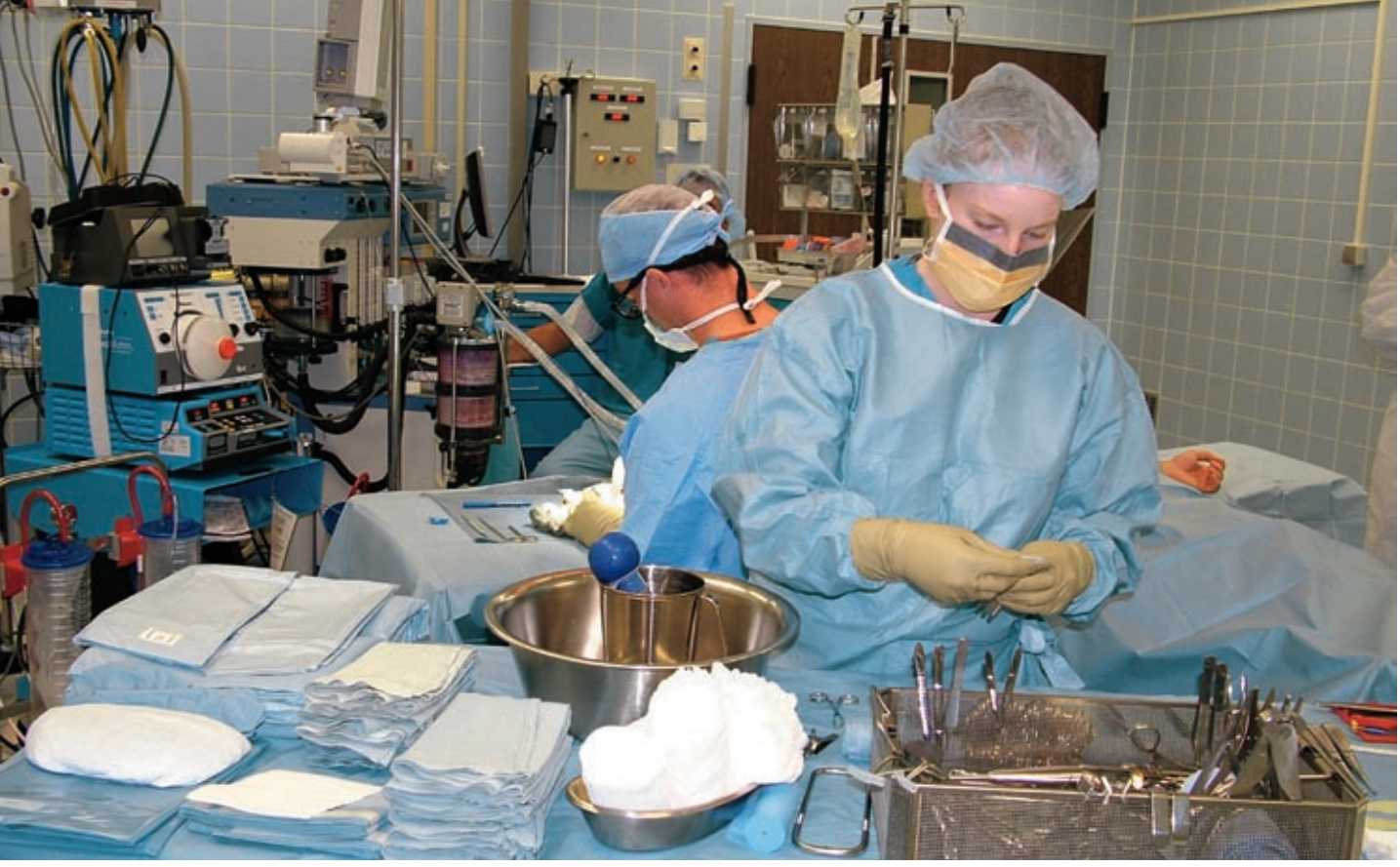
THE face of the Army in Europe has been changing dramatically since the fall of communism nearly two decades ago. U.S. installations have closed as a result of the Department of Defense's continuing effort to downsize — to save money and put resources where they're most needed.

In July 2005 DOD reported some 13 installations in southern Germany would close by the end of 2007. Landstuhl Regional Medical Center is one of the few military facilities in the region that has proven its relevance through some of the toughest recent times.

Since operations Enduring Freedom and Iraqi Freedom began, DOD's premier medical center in Europe "went from being a sleepy community hospital to an active, vibrant, turbulent medical center, with the number of people arriving and being air-evacuated to the States always changing," said MAJ Kendra Whyatt, head nurse of the hospital's Orthopedic Ward.

As of September 2005 more than 27,000 patients had arrived from Iraq

The most seriously wounded service members are evacuated by air from the combat zone to Ramstein Air Base, about 15 minutes by road from LRMC.



Medical staffers prepare for a procedure in one of LRMC's eight operating rooms. The hospital can also accommodate 20 intensive-care-unit patients.

and Afghanistan. After the battle in Fallujah began on Nov. 8, 2004, as many as 455 patients arrived in a week's time, hospital officials said.

Before operations Enduring Freedom and Iraqi Freedom, LRMC's intensive-care unit could accommodate six patients, now it can handle 20. The number of operating rooms has doubled to eight. In fact, admissions climbed 56 percent, operating-room cases swelled by a staggering 100 percent and the number of pharmacy products leaped by 141 percent, said LRMC spokeswoman Marie Shaw.

Today, when the public-address system blares "wheels on the ground," LRMC's doctors, nurses, psychiatrists, chaplains and members of the 77-member Deployed Warrior Medical Management Center [*see related story*] spring into action.

To date, coalition troops from 38 nations have been cared for at LRMC, as have Soldiers, other service members, government civilians and contractors.

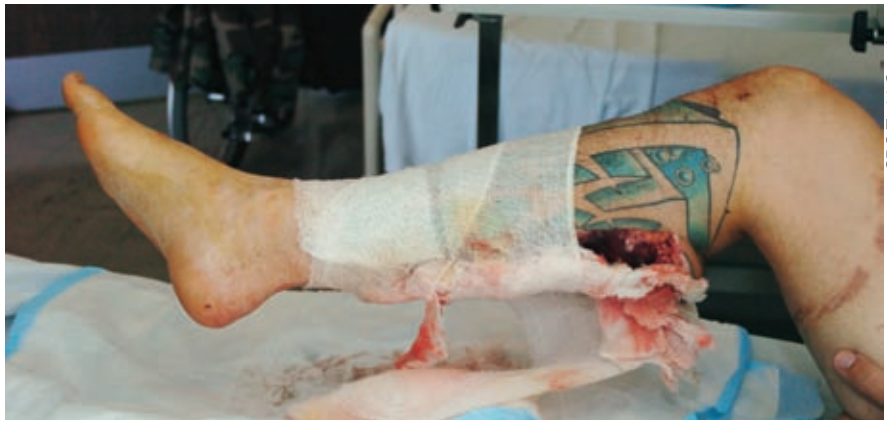
Chaplain (CPT) Billy Steen stood at the bedside of SPC Ryan Bowen of the Fort Stewart, Ga.-based 4th Brigade Combat Team, who was medevaced to LRMC after an improvised explosive device blew up his Abrams tank near Balad, Iraq.

Bowen had not only his own injuries to deal with — a perforated liver and leg pierced by shrapnel and burns in 20 places — he'd also witnessed the deaths of two of his buddies.

Time to Talk

"This is the first real stop for Soldiers who have been wounded in Iraq and Afghanistan," said Steen. "We've heard how well chaplains have worked with wounded Soldiers at the aid stations downrange, but this is the Soldiers' first real chance to talk about what happened. And they say, 'Thank you so much for listening.'

"Up until they come here, life has been a whirlwind for the wounded — they've been quickly moved from the aid station to a combat support hospital to here. Many of the Soldiers who arrive at LRMC have lost com-



SPC Todd Goodman

LRMC staffers work daily with service members who have suffered gunshot wounds, burns and internal-organ damage, among other injuries.

> LRMC has cared for coalition troops from 38 nations, Soldiers, other service members, government civilians and contractors.

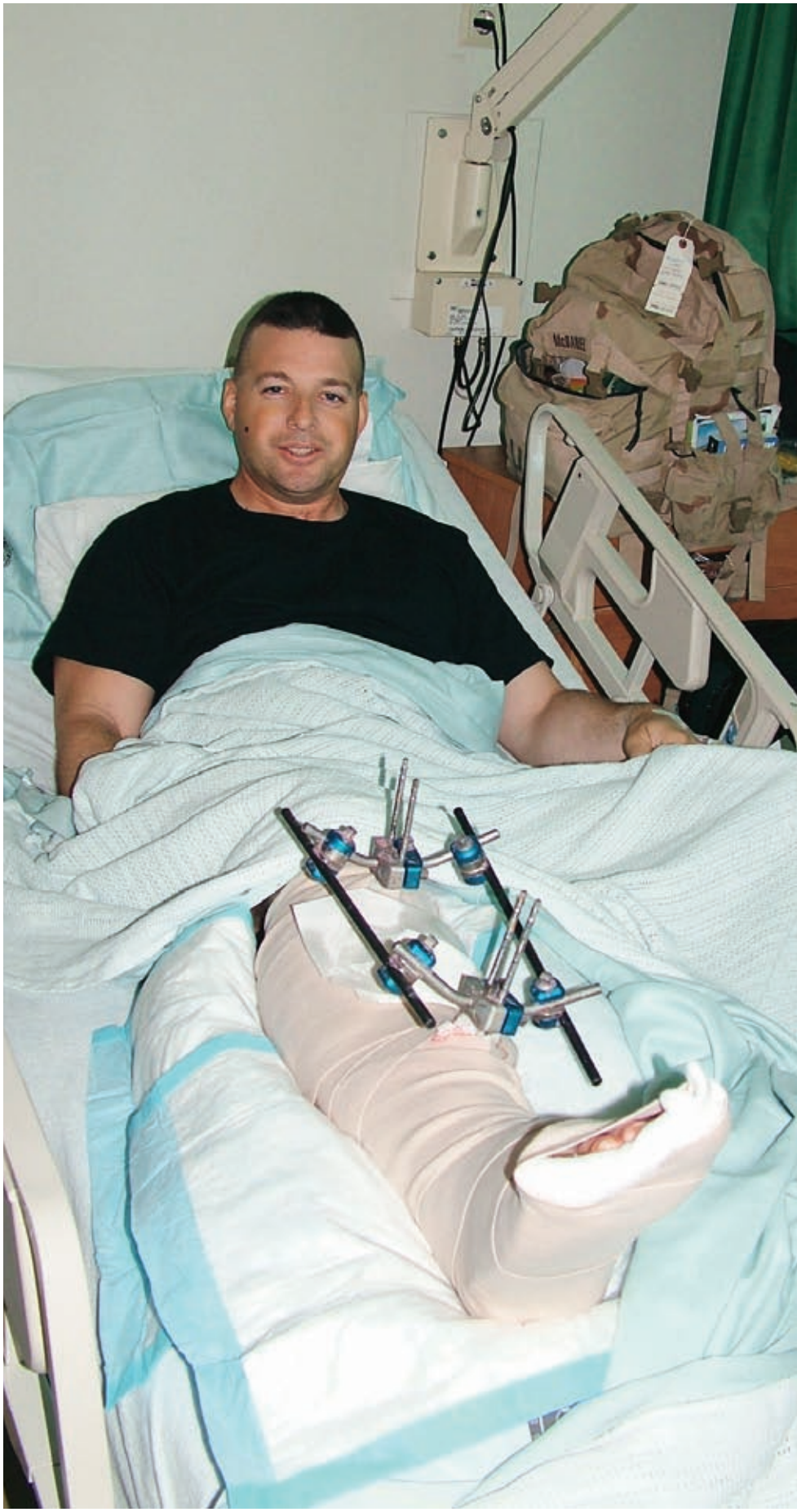
rades and they feel guilty about being out of the combat theater while their units remain in-theater," Steen said. "Many ask themselves if they could have done something differently to prevent a buddy from dying.

"It's very important for them to recount what happened. They've rehearsed it in their minds time and again," he added. "They think they need to get back to the fight, and they wonder how their injuries will affect their careers."

Often they rationalize that they trained together, so they should return home together, Steen said. "When they don't come back with their units, they face one of the facets of their loss. We cry with those Soldiers. They need somebody to cry with them."

"I've talked to a Soldier who had the first joint of an index finger amputated, and he just wanted to know what life holds in store for him," said Whyatt. "Other Soldiers have had arms and legs amputated and just want to go back to the fight. I've seen grown men cry when they're told they're going to be air-evacuated to the States, because they didn't think their injuries were so bad."

What makes one person cope and adapt more easily than another?



IED-injured SSG Clifford McDaniel Jr. is among the many OIF and OEF service members who have undergone treatment at LRMC.

Members of an Air Force critical-care air-transport team prepare a gurney full of equipment for a patient's scheduled movement to Brooke Army Medical Center, Texas.

LTC Cathy Martin, head nurse in LRMC's intensive-care unit, confers with Dr. (LTC) Kevin Kumke about a patient's prognosis.

Upbringing, level of responsibility, so many things enter into it, Whyatt said.

Getting Soldiers Well

The number-one mission for LRMC's medical staff is to help Soldiers get well.

Steen, who has done pastoral work for many years, has been dealing with the casualties of war for the first time in his career. He's among the first people patients see upon their arrival at LRMC. And he assures them that many people are praying for them.

"Seeing Soldiers all torn up is draining," Steen said. "But this is hallowed ground, because it's the first real stop for men and women who have risked their lives in OEF and OIF and it's a privilege to be able to work with them."

Preparing to Minister

Chaplains prepare themselves for ministering to combat casualties by attending the two-week Emergency Medical Ministry Course offered at Brooke Army Medical Center at Fort

Helping Caregivers Cope

MEDICAL professionals who daily work with wounded Soldiers are prime candidates for compassion fatigue, said Dr. (LTC) Gary Southwell, chief of Psychology Services at Landstuhl Regional Medical Center.

"People equate the condition to 'burnout,'" he said. "There are similarities, but it's not burnout. Someone who suffers from compassion fatigue is traumatized by the event that has traumatized the Soldier, such as traumatic pain from an amputation, disfiguring wound, or severe burns, and occasionally having to remove a Soldier from life support."

Southwell said symptoms of the condition include breaking down in tears for no apparent reason and being excessively irritable, chronically late for work or turning to alcohol, too often, for comfort.

Shortly after he arrived at LRMC, Southwell witnessed a surgeon break down in tears while talking to the media and a nurse expressed anger about the unfairness of the war.

Through the hospital's Compassion Fatigue Prevention Program, or CFPP, psychologists, social workers and chaplains are among the professionals who talk to the medical staff about potential intervention, Southwell said. "We have an informal process by which people can come and talk 'off the record.'"

Enlisted Soldiers and nurses predominantly take advantage of the program, Southwell said. "Physicians are more hesitant to acknowledge they need to talk to someone. Rather, they'll exercise excessively to release stress, or they'll become workaholics. Sometimes a supervisor will ask that we speak to the physician."

"At times working with the Soldiers wounded in Iraq and Afghanistan affects me personally, especially when they're so

(continued on pg. 14)

Those wounded in Iraq and Afghanistan are rushed to the closest treatment facility in the combat theater — whether operated by the Army, one of the other services or even another of the coalition countries.

Sam Houston, Texas, and twice annually at LRMC. The course curriculum includes the Critical-Incident Stress-Management Course, which prepares chaplains to work with both patients and hospital staff to also combat compassion fatigue. *[See accompanying box.]*

Chain of Medical Care

Many more Soldiers survive combat wounds today than at any other time in history because of the more immediate care they receive. Those wounded in Iraq and Afghanistan are rushed to the closest treatment facility in the combat theater — whether operated by the Army, one of the other services or even another of the coalition countries.

SSG Clifford McDaniel Jr.'s right leg was badly injured in a roadside-bomb explosion in Iraq. McDaniel, a Reservist with the 48th Brigade's 648th Engineer Battalion from Statesboro, Ga., said another Soldier who had been in his up-armored Humvee when it ran over a trip wire initially patched him up before a helicopter medevaced him to Baghdad Hospital, in the "Green Zone." He was there for a day, then briefly someplace else in Iraq before his evacuation to Landstuhl.

"I couldn't have asked for better treatment," McDaniel said. "Everyone who cared for me has every right to be proud of the work they've done."

First-line Treatment

"The first line of treatment 'downrange' is buddy aid," said LTC Cathy Martin, head nurse of LRMC's intensive-care unit. That might mean the buddy applies a tourniquet to stop severe bleeding. A combat medic starts an intravenous line, and then a wounded Soldier is rushed to the nearest combat-support hospital to receive blood or undergo surgery."

Chaplain (CPT) Billy Steen visits with SPC Ryan Bowen, whose M1 Abrams tank was destroyed by an improvised explosive device in Iraq.

(continued from pg. 13)

young," said MAJ Kendra Whyatt, head nurse of the Orthopedic Ward. "What strikes closest to the heart is when they tell you what happened, and it sounds like that just couldn't be happening."

Because Whyatt is an active-duty Soldier stationed in Germany, her family is with her. So she can draw on that support. Reservists don't typically have that luxury. "Chaplains are also always on the wards. Sometimes I'll ask one of them if they have time before the next patient to talk to me."

"One nurse told me she often thinks about her own children when she's working with wounded Soldiers," Southwell added. "She imagined her own son missing a leg and having suffered other injuries that would prevent him from being able to have children. She experienced nightmares and had a hard time feeling happy."

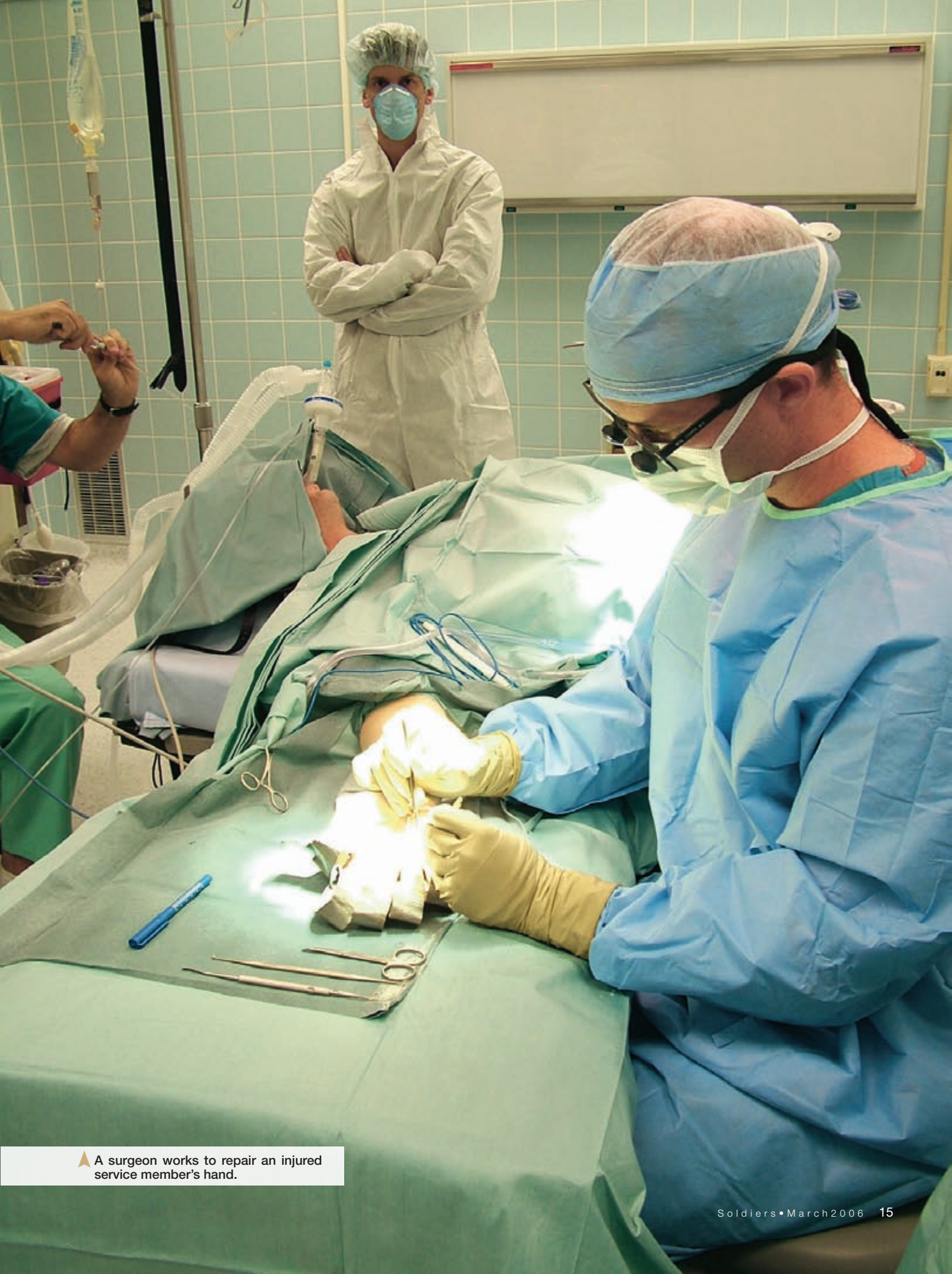
Members of the CFPP give lectures on what affected people can do. "We emphasize that these people are not mentally ill," Southwell said. "Their reactions are normal reactions to very difficult situations."

Rarely do their difficulties lead to psychiatric counseling, Southwell added. But, occasionally, people who suffer from compassion fatigue do develop anxiety disorders.

To stem such difficulties among deployed troops, "we deployed 26 mental-health providers to Afghanistan," Southwell said. Soldiers get group and individual therapy. "And we screen all Soldiers when they return to their duty stations and offer classes to help them reintegrate into their families. We also talk to all Soldiers 90 days after they have redeployed from Iraq and Afghanistan, to assess their emotional states."

Southwell said about 25 percent of Soldiers who have been to the combat theaters come back with symptoms of post-traumatic stress disorder. "It's good that we acknowledge it, so that we can treat them."

These Soldiers have a high startle response, and often their spouses will encourage them to get help, Southwell said. Through medication and group therapy the symptoms often clear up rapidly after a few months, Southwell said. — *Heike Hasenauer*



A surgeon works to repair an injured service member's hand.

During the Gulf War it took about 28 days from the time a Soldier was wounded to the time he was evacuated to the States, Place said. The average length of time today is three to four days.

"Surgeons downrange are the key to the survivability of our patients," Martin said. "Without them, wounded service members wouldn't get to us."

All service members wounded in Afghanistan and Iraq arrive at LRMC via one of two evacuation sites in Afghanistan and four sites in Iraq, said Dr. (LTC) Ron Place, deputy commander for LRMC's eight outlying clinics and managed care facilities in Germany, Belgium and Italy. Twenty-three percent of the wounded are returned to duty in theater.

Critical-Care Air Transports

"We have Air Force critical-care air-transport teams assigned to us," said Martin. "Three to four times a week these flying intensive-care units from nearby Ramstein Air Base pick up ICU patients and either bring them here or transport them from LRMC to the States. The CCAT teams do what we do in the ICU, but they do it in the austere environment of a military transport aircraft."

Changes Sparked by War

Today, some 70 percent of Whyatt's staff on the Orthopedic Ward is composed of Reservists. And Reservists can be found supplementing active-duty hospital staff and civilians throughout the hospital.

The types of injuries hospital personnel are dealing with have changed, too. While Whyatt and her staff see typical orthopedic injuries, for example, "the mechanism of injury is what makes them different," she said.

"We're dealing with breaks due to IED injuries, vehicle rollovers or vehicle rollovers onto IEDs, together with gunshot wounds," she said. "So, we're not just taking care of broken bones, but soft-tissue injuries as well."

Before OIF began, the ICU was staffed by some 20 medical professionals, Martin added. At the height of the war, there were between 85 and 93.

Other things have changed, too.

Among the greatest improvement to patient care has been a medical tracking system called JPTA *[see story on pg. 18]* that provides the staff the patient's medical history before the patient arrives. It tracks a patient en route to LRMC, from the departure airfield to his arrival at Ramstein Air Base and during the drive to the hospital, Martin said.

The timely information helps medical teams properly prepare for the patient's arrival, covering every physical and emotional contingency by having the appropriate professionals on hand, Martin said.

During the first Gulf War it took about 28 days from the time a Soldier was wounded to the time he was evacuated to the States, Place said. The average length of time today is three to four days.

If a patient can be returned to the combat theater, he usually returns within two weeks, Martin added. If he needs long-term care, he's evacuated to the States, often to BAMC, Walter Reed Army Medical Center, in Washington, D.C., or a hospital near the Soldier's home station, Place said.

"There's no place in the world that's doing what we're doing now," said Martin, a 20-year Army veteran who served with the 5th Mobile Area Support Hospital in the first Gulf War

Army Reservist SSG Ryan Huebscher *(foreground)* is among the multi-service staff members who man LRMC's 20-bed ICU around the clock.

and has seen her share of trauma and burns.

"We may have seen burn patients in the past — from house fires. But burns with blast are very different injuries resulting in head-to-toe trauma — or 'polytrauma,'" Martin said. Picture a car accident in which the car explodes and the passengers are burned.

"One reason a trauma patient dies is because something that should have been observed is missed," Martin said. "That's why, for the past year, 15 to 20 people — including an infectious-disease specialist, respiratory specialist and a nutritionist — participate in daily rounds to evaluate the patient."

Lessons learned have resulted in procedural changes downrange, too.

Medics are trained to leave wounds open; they no longer close amputations, because dirt can get into the wounds and cause infections, Place said. And patients with abdominal wounds are medevaced to LRMC with only bandages covering the wounds, allowing swelling inside the abdomen to decrease and reducing the possibility of kidney damage and renal failure.

The one-handed tourniquet, which Soldiers can administer to themselves to stop bleeding, has saved lives, as has the process of removing foreign material from wounds downrange and doing cultures on tissue from the wounds to determine what bacteria exists and how to combat it, Place added.

The protective equipment Soldiers wear today saves lives, but it leaves them with perforated ear drums and traumatic brain injury, Place said.

"Because some parts of their bodies are so well protected, the parts that aren't protected are injured. Today it takes a .50-caliber machine-gun round or rocket-propelled grenade to pierce the Soldier's body armor. And the most serious injuries are due to IEDs, RPGs and mines," he said.

"The vast majority of injuries are soft-tissue injuries to extremities, broken bones and injuries to major vessels. Roughly four to five percent of OEF/OIF patients undergo amputations," Place said.

Thirty to 50 patients have had to have eyes removed, Place said, and one Soldier arrived at LRMC blind and deaf. "Through the care he received here, he'll have reasonable sight with corrective lenses and hearing with hearing devices."

Dr. (LTC) Kevin Kumke is chief of LRMC's Pulmonary and Critical Care Medical Service and is among the ICU physician team at LRMC, which also includes three surgery-trauma specialists.

A typical ICU patient from the combat theater comes in to LRMC breathing with the help of a mechanical ventilator, with various intravenous lines delivering medications, and a number of wounds bandaged, Kumke said.

"We convert the patient from the equipment used during his transport to ICU equipment, assess his stability and evaluate his condition through lab work and CAT scans."

The survival rate for combat casualties at LRMC is very high "due to the emergency care performed in the combat theater, Kumke said. "We're able to build on that.

"We train for a decade to be able to make a difference, and here we can make that difference," he said. "It's been very humbling to be here at this important place and time."

Reintegrating Former Hostages

Landstuhl Regional Medical Center is also the first "real" stop for service members, Defense Department personnel and contractors who have been held hostage in Iraq, said LTC John Pamerleau, team leader of LRMC's Hostage-Reintegration Team. The team includes a chaplain, a public-affairs officer and other members of the hospital staff.

LTC Gary Southwell, LRMC's chief of Psychology Services, said team members spend a lot of time talking to the former hostages about their experiences, not only for the individual's own benefit, but to glean intelligence about the experience.

Through the interviews, officials can learn which hostage techniques were effective and which ones were not.

"In Vietnam, Soldiers sometimes did not survive as prisoners of war because they unnecessarily offended their captors," Southwell said. During the debriefing earlier this year of a person recovered from Afghanistan, several "best practices" were noted, he added. For example, showing respect for the host country's religion helped the hostage maintain the support of the local people.

"A four-to-six day decompression phase after the former hostage arrives at LRMC is very therapeutic," Southwell said. "It helps us understand how much the individual has been traumatized.

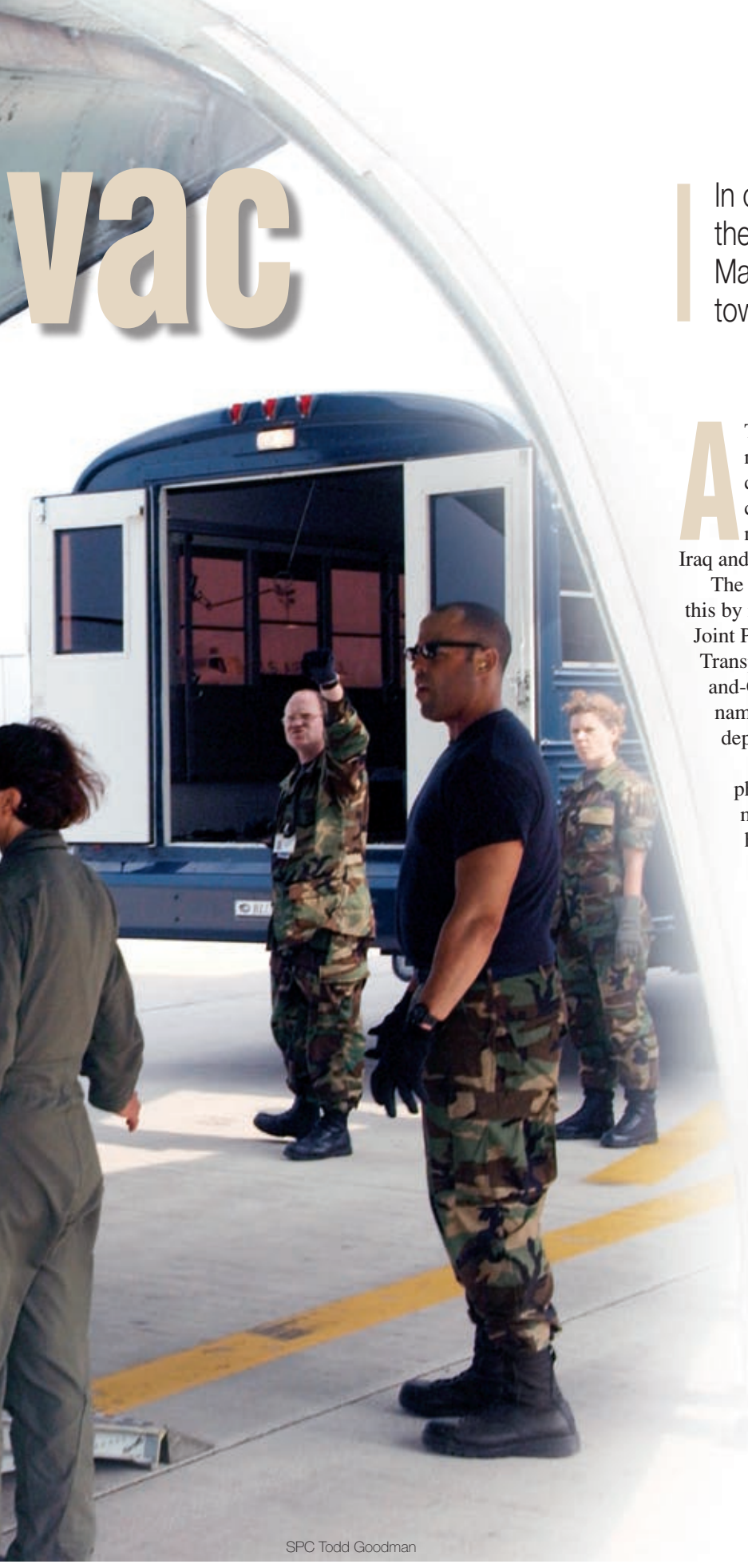
"These people are very much in the public eye," Southwell said of former captives. While the Hostage Reintegration Team works to ease the hostages' transitions to "normal" lives, team members also work to prevent them from saying anything that could be detrimental to the units they might have been associated with downrange. The team does that by teaching former captives strategies to buffer them from the media." — *Heike Hasenauer*

Europe's Mede Managers

Story and Photos by Heike Hasenauer

vac

In operation since June 2003, the Deployed Warrior Medical Management Center is geared toward helping deployed Soldiers.



SPC Todd Goodman

AT Landstuhl Regional Medical Center in Germany, the staff of the Deployed Warrior Medical Management Center track the movement, condition and care of wounded and sick service members and civilians en route to LRMC from Iraq and Afghanistan.

The DWMMC's 80 military and civilian staffers do this by monitoring online computer databases called the Joint Patient Tracking Application and TRACES — for Transportation Command Regulating and Command-and-Control Evacuation System — which contain the name, unit and other information of every Soldier deployed in the combat theaters.

When a service member is wounded in Iraq, a physician at the departure airfield there logs information into the system about the person's injuries, how they were inflicted, what medications were administered, what other treatment was provided and what the diagnosis is.

"We review the computer spread sheets on incoming patients every two hours," said SSG Shadonika Crawford, the DWMMC's mission team NCOIC.

Additionally, the group is augmented by the hospital chaplain's office, American Red Cross volunteers and liaison personnel.

In operation since June 2003, the DWMMC is specifically geared toward helping service members who are deployed in support of operations Enduring Freedom and Iraqi Freedom and require medical care, whether they've been injured in combat or need routine medical attention, said LTC John Pamerleau, the DWMMC's executive officer.

Routine attention, which would not be provided through normal sick call in the combat theater, includes treatment for patients newly diagnosed with heart conditions,

Seriously wounded Soldiers arriving at Ramstein Air Base, Germany, are loaded aboard an ambulance bus and escorted to Landstuhl Regional Medical Center by members of LRMC's Deployed Warrior Medical Management Center.

Anesthesiologist 1LT John Goeddertz, deployed to Landstuhl Regional Medical Center from the 328th Combat Support Hospital in Salt Lake City, Utah, discusses anesthesia options for a next-day procedure with a Soldier and his family.

cancer or other serious illnesses.

At the beginning of OEF and OIF, LRMC personnel had an idea of how many patients would be medevaced in, but they didn't have specific information about individuals' medical conditions to speed up care upon arrival, Pamerleau said.

As many as 100 patients arrived per day during that time. And there was a lot of scrambling to get them where they needed to go, he said.

In September 2005 LRMC officials reported that since its activation the DWMMC has received 18,984 outpatients and 7,579 inpatients. The latter included 4,708 patients with combat injuries, said LRMC spokeswoman Marie Shaw.

The purpose of the DWMMC is to get deployed patients coming from Iraq and Afghanistan immediately cared for, so they can either return as soon as possible to the combat theater or be evacuated to the United States for further treatment, Pamerleau said.

"We have a person on the flight line at Ramstein who alerts us when the medevac flight lands," said Crawford. "We're then right outside the ER when the litters come off the buses, to show our support."

Crawford said the team was notified one day at 4 p.m. that a flight carrying five female Marines and one male was coming in from Balad. The oldest female was 22. The young man was 19. "All of them were burned over 90 percent of their bodies, and both of the man's hands had been amputated.

"They were here within six hours," Crawford said. "A burn team from Brooke Army Medical Center at Fort Sam Houston, Texas, arrived by noon the next day."

The mission team in-processes the patients, completes patient records and arranges for billeting and other support for outpatients.

The average stay at LRMC for a combat casualty is three days; a patient who is stable enough to be transported to U.S. medical facilities is then medevaced to Andrews Air Force Base, Md., for further evacuation within the United States. DWMMC personnel handle the details.

"A flight from BAMC, complete with a burn team, will be dispatched here for a burn patient," Pamerleau said, "even if we have one burn patient."

In fact, even before the patient is medevaced from Iraq, medical personnel in Iraq alert BAMC officials that the patient will be arriving within the next few days.

"Once the burn patient is in the air en route to Germany, the team from BAMC has already departed for Germany," Pamerleau said.

Radiology technician SSG Robert Hernandez, deployed from the 328th CSH in Sacramento, Calif., prepares a patient for a procedure.

On Medicine's Leading Edge

Story Compiled by Heike Hasenauer

THE U.S. Army Materiel Command at Fort Belvoir, Va. — which administers the Army's "Greatest Inventions" program — lauded the U.S. Army Medical Research and Materiel Command in 2005 for two of the Army's top inventions of 2004.

Teams of inventors from the Telemedicine and Advanced Technology Research Center at Fort Detrick, Md., and the U.S. Army Institute of Surgical Research in San Antonio, Texas, were honored for their Electronic Information Carrier and Chitosan Hemostatic Dressing, respectively.

Those two inventions and three others are highlighted in the following pages.

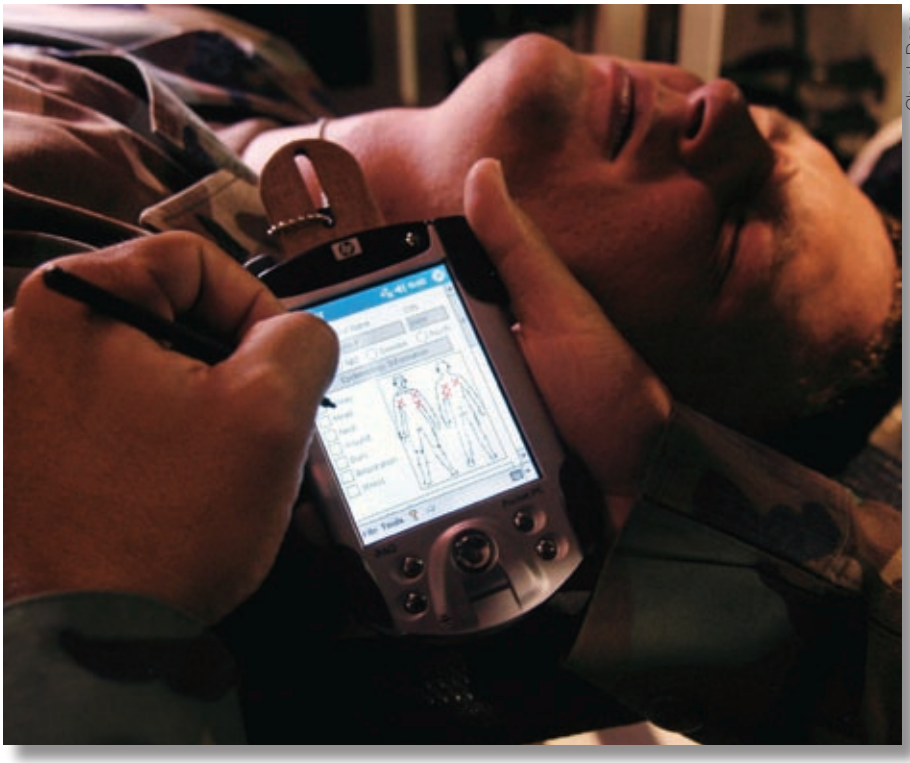
Electronic Medical Files

The Electronic Information Carrier is a wireless storage device the size of a dog tag that can store up to four gigabytes of data, including medical records, which historically tend to get lost when they exist solely on paper. After learning of the military's sporadic medical recordkeeping during the 1991 Gulf War, Congress mandated the services improve their processes.

Using the EIC, heath-care providers can securely and wirelessly read and write data.

The EIC provides a patient-centered data flow, so as the patient moves within the medical network, the EIC will have the latest information.

A wireless EIC also lets the medic read and write data without having to search a Soldier to find it and physically insert it into a personal digital assistant or laptop.

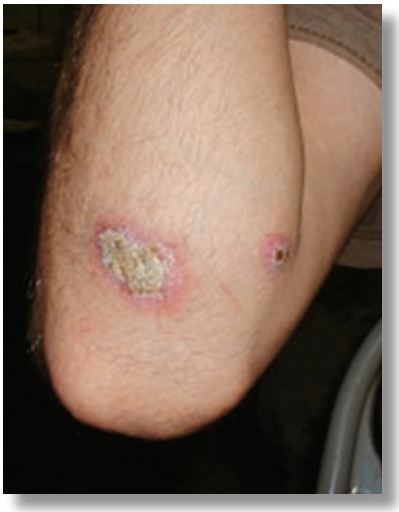


Chuck Dasey

Better Bandages

"Uncontrolled bleeding is a major cause of death in combat," said Army Surgeon General LTG Kevin Kiley. "About 50 percent of those who die on the battlefield bleed to death in minutes, before they can be evacuated to an aid station."

Today, Army combat medics in Iraq and Afghanistan use the Chitosan Hemostatic Dressing, which is made from chitin found in shrimp shells. It bonds with blood cells to form a clot. Medics began receiving the dressings in 2003, and they've been reported to be effective in stopping or reducing bleeding in more than 90 percent of combat cases.

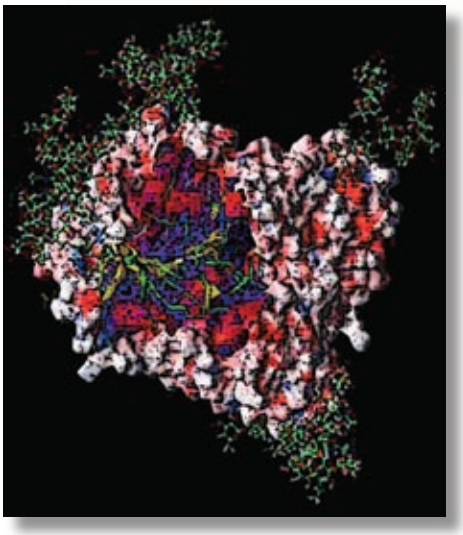


Nerve-Agent-Warding Enzyme

Plasma, goats and plants may one day hold the key to protecting Soldiers and the public from nerve agents.

Boosting the amounts of an enzyme called butyrylcholinesterase, normally present in small quantities in blood plasma as detoxifiers, can interdict nerve agents entering the bloodstream, so the nerve agents can't reach their targets.

Knowing this, researchers for 20 years have been finding ways of producing large amounts of the enzyme they call a "bioscavenger."



"The bioscavenger is being tested against all known nerve agents," said COL Michelle Ross, deputy commander of the Army Medical Research Institute of Chemical Defense.

"The objective is to develop a pretreatment that is broad spectrum and will work against all known nerve agents," she said.

Detecting Leishmaniasis

In the winter of 2005 the College of American Pathologists approved a new diagnostic test that detects parasite DNA to diagnose Leishmaniasis, a parasitic disease caused by sand fly bites that affected hundreds of service members during Operation Iraqi Freedom.

Developed by the Walter Reed Army Institute of Research, the test provides positive results in one hour, rather than weeks, based on a polymerase chain reaction.

"We can project this service anyplace that can reach us by Federal Express mail," said COL Alan Magill, science director at WRAIR. "We get the package with the sample, prepare the mixture, run the assay and e-mail our response back to the physician downrange."

Golden Hour Blood Box

In 2003 what's called the "Golden Hour" blood container, created by a government contractor in Minnesota, brought to fruition the vision of a three-person team at the Blood Research Department of Walter Reed Army Institute of Research in Washington, D.C.

Several WRAIR surgeons who returned from Afghanistan voiced their concerns about getting blood to the front lines — to small groups of Soldiers who were being sent out on missions and faced delayed medical evacuation if they were wounded.

In the past, medics put units of red blood cells in coolers filled with ice to keep blood at is optimal temperature, between one degree and 10 degrees Celsius.

If a patient is given bad blood — that is, blood that has not been kept at the correct temperature — kidney failure and death can result, said WRAIR researcher Dr. Victor MacDonald.

After creating several prototypes, the Minnesota company developed the Golden Hour container. Its name is based on the tenet that beating the effects of shock within the first hour of injury — by giving a blood transfusion, for instance — is vital to a trauma patient's survival.

The container, a 10-inch square box that needs no power source to maintain its internal temperature, uses a combination of the vacuum-insulated panels and an internal container that has a liquid phase-change materiel, like the reusable freezer packs people use in beverage coolers.

The internal portion of the container is put in the refrigerator or freezer for at least two hours, then is put back in the container along with the units of red blood cells.

How long the blood stays good in the container depends on the outside temperature, said LTC Frank Rentas, assistant chief of blood research at WRAIR.

In tests run at the Blood Research Department, when the outside temperature was –9 degrees Fahrenheit, the red blood cells stayed good for more than 97 hours; at 105 degrees Fahrenheit, they were good for more than 78 hours; and at room temperature, they can last 121 hours.

The above information was compiled from news releases written by Karen Fleming-Michael, a journalist with the U.S. Army Medical Research and Materiel Command Public Affairs Office.

Brooke Army Medical Center in San Antonio, Texas, is home to the Army's premier burn-treatment center.

BAMC's Burn Flight Team plays a pivotal role in the care that burn patients receive. It's the only flight team dedicated specifically to the transport of patients with severe burns.

SFC Alberto Betancourt

The Army's Burn Center

Story by Andricka Hammonds

Andricka Hammonds

Aided by therapist Stephanie Angle, SSG Christopher Edwards takes small steps around the burn center to regain his ability to walk.

While patients may not remember their flights back to the United States or the medical team that took care of them on the flight, they can be assured they will get the best care available.

WHILE investigating a suspected chemical-weapons site in Baghdad in April, enemy activity triggered an explosion and SGT Joe Washam was severely burned over 40 percent of his body.

The U.S. Army Burn Flight Team flew to Landstuhl Regional Medical Center in Germany to transfer Washam to the Institute of Surgical Research at Brooke Army Medical Center in San Antonio, Texas. Four days later, when he arrived at BAMC's Burn Center, Washam was unconscious and unaware of his surroundings.

Although Washam didn't know it at the time, he was slated for the best burn treatment the Department of Defense has to offer. While patients may not remember their flights back to the United States or the medical team that took care of them on the flight, they can be assured they will get the best care available.

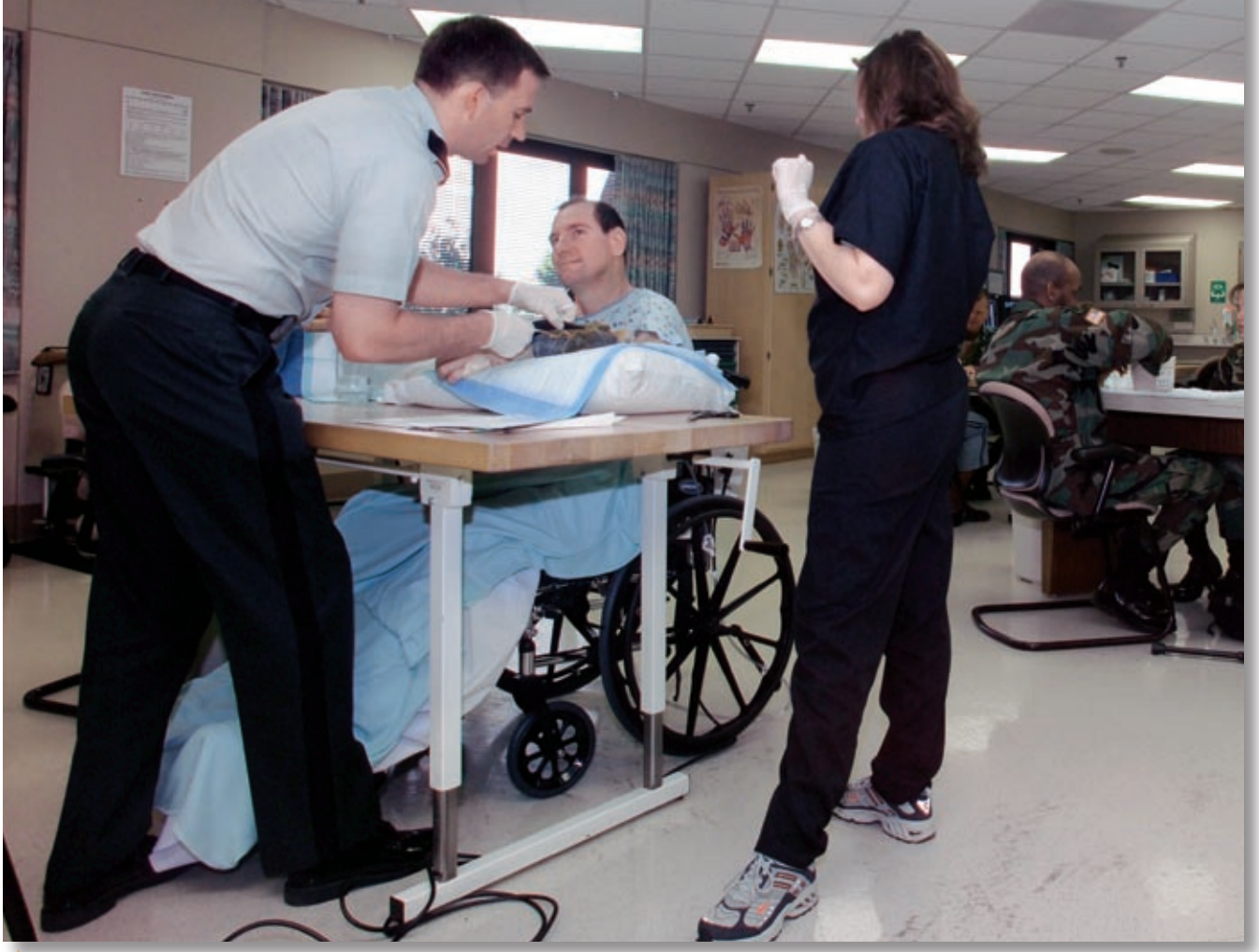
Headquartered at the Institute of Surgical Research, the U.S. Army Burn Center provides state-of-the-art surgical and rehabilitation treatment to burn patients suffering electrical, chemical or thermal burns.

As a result of the war on terror, many of the burns treated at BAMC are from improvised explosive devices, rocket-propelled grenades and flammable liquid explosions.

When Soldiers are wounded in combat, they are usually taken to Landstuhl from the combat support hospital in-theater. At Landstuhl, burn patients are stabilized further, until the U.S. Army Burn Flight Team arrives to transport them back to the United States — usually within 72 hours of the injury.

Andricka Hammonds works in the Brooke Army Medical Center Public Affairs Office.

SFC Alberto Betancourt



In BAMC's Occupational Therapy Rehabilitation Center, patients relearn the skills they'll need once they're released.

The Burn Flight Team plays a pivotal role in the care patients receive. It's the only flight team specifically dedicated to the transport of patients with severe burns, said CPT Gerald Ross, a team staff nurse.

The team departs San Antonio at a moment's notice. Able to deploy within 12 hours of notification, the team transports severely burned patients from all over the world.

Since March 2003 the flight team has transported 174 burn patients. The flight team provides world-class medical augmentation in burn and trauma triage, resuscitation treatment and evacuation, all while airborne aboard an Air Force C-17 transport.

"My focus while on these flights is getting the Soldier home safe," said Ross. "We are taking care of our comrades who are defending the country. I want Soldiers to know that even though they don't remember us, we remember them."

Washam said he knows his medical treatment at BAMC was the best treatment available.

"Since BAMC is a military hospital, service members can receive burn therapy for an extended period of time, because we are here until therapy is completed," he said.

Washam suffered third-degree burns over 40 percent of his body. He said he initially had trouble complying with the demands of therapy.

"But as I started to heal, I began to understand how important therapy is in getting my life back," said Washam.

He has been receiving therapy at BAMC for 18 months, and the journey is not over.

"A burn scar is unforgiving," said Washam, reflecting on his scars. "I wouldn't wish the injuries I received on anyone, not even the person who inflicted them on me."

"We have top-notch burn surgeons and nurses who are ready and honored to do their

"Burn injuries are some of the most debilitating injuries of all. They are taxing on a patient's spirit, because of the rigors of the healing process and facing life with scars," said Dr. Steven Wolf, director of the Burn Center.

Soldiers aren't the only ones who endure this type of injury. For those with families, staff members at BAMC often finds themselves taking care of the Soldier's loved ones.

Tammy Edwards remembers what it was like to find out her husband, SSG Christopher Edwards, had been seriously injured.

It was a beautiful spring day. Tammy was mowing her lawn when she saw two "green suits" walking toward her. "My heart just stopped," she said.

The only thing she could think was that her husband had

Andricka Hammonds

Burn patient SGT Joe Washam does stretching exercises that are intended to help him gradually increase his ability to manipulate small objects despite the damage to his hands.

been killed. She listened to the messengers, waiting to hear those words, "Ma'am, I'm sorry but we lost him in battle." But, those words never came.

She was relieved to find that he had been injured and not killed. Edwards was sweeping for improvised explosive devices when a 500-pound bomb exploded beneath him.

The flames engulfed him. Edwards works everyday to reclaim his life, after suffering third-degree burns to more than 79 percent of his body

"I am just happy he's alive. I haven't had a chance to grieve for his injuries. I have to stay strong. He needs me to be strong," said Tammy.

She awakens every morning with a smile on her face, something that her husband appreciates and has come to count on.

best for our wounded service members."

"Tammy is a God-send, I couldn't have survived this without her," Edwards said. "Her support and confidence get me through the times when I think I have nothing left. Our four-year-old son needs his daddy back, so I push myself in therapy so that can happen."

Edwards is faced with learning the fundamental functions of everyday life. Every day he attends burn therapy; he is working toward the goal of walking again, sitting again, living again.

Tammy spends her days at BAMC, by her husband's side. "He asks me what I see in him, because he thinks he's not the man he used to be. I just look into his eyes and say, 'You are my husband, and I love you. It doesn't matter what you look like.'" Six-feet-three inches and about 150 pounds, Edwards consumes 4,000 calories a day to regain his body weight.

And his therapy is painful. Stephanie Angle, an occupational-therapy assistant, must stretch every burned finger, despite the pain. Bleeding is common during a stretching session. But without complaint, Edwards pushes forward.

Angle is accustomed to pushing the limits with her patients. Despite some cries of pain, she unwaveringly continues therapy, thinking of her own ultimate goal, for her patient to regain independence.

Tammy said she feels close to the staff at BAMC. "Their attitude makes coming here bearable. They have bent over backwards for us so that I can do what's best for our family," she said.

The burn center staff is pivotal in the treatment the service members receive. "The people who work here are dedicated to what they do," said Washam.

"People who work here want to be here," Ross said. "We have top-notch burn surgeons and nurses who are ready and honored to do their best for our wounded service members."

As a result of the burn center staff's hard work, some service members have gone on to a full recovery. Among them are Soldiers like SGT Connie Spinks, who revisited the burn gym for the first time since she left.

During her visit, she watched others go through the pain she once endured. She looked over at the balance bars she used to relearn to walk and, with tears in her eyes, said: "I remember being here; it was so hard, so painful. I thought I'd never come back here."

At one time, Spinks was unable to walk on her own. She was dealing with some of the same hardships Edwards copes with today.

Spinks hopes her success may give others a glimmer of hope. "It was the toughest thing I ever had to do, but I did it, and I know others can do the same."

SFC Alberto Betancourt

Assistant occupational therapist SGT David Barnes performs deep scar massage on SPC Mary Herrera of the Arizona National Guard's 855th Military Police Company.

Troy Hopkins

Robert d'Angelo

BAMC physical therapy aide Troy Hopkins directs wounded Soldiers using a 15-pound medicine ball during abdominal-strengthening exercises.

Caring for Amputees

Story by Nelia Schrum

WHEN SGT Kortney R. Clemons raced to help a wounded Soldier in an overturned vehicle in the streets of Baghdad in February 2005, the explosion of a nearby improvised explosive device made Clemons a casualty, too.

Clemons, a 25-year-old medic, lost his right leg above the knee. A former cornerback on his high school and college football teams in Mississippi, he now faces another fight — adjusting to life without a limb.

Medically evacuated to Brooke Army Medical Center, Texas, within days of his injury, Clemons said he figured the explosion happened for a reason and the important thing was that his patient also survived the blast.

Clemons joined fellow amputees recovering at BAMC, where the Department of Defense opened its second amputee-care center in January 2005. The first center opened in December 2004 at Walter Reed Army Medical Center in

Former SGT Kortney Clemons, who lost a leg to an IED, proudly wears the gold medal he won for bench pressing 275 pounds.

Nelia Shrum works in the Brooke Army Medical Center Public Affairs Office.

Washington, D.C.

After learning to walk again with the aid of a prosthetic device, Clemons is now able to use a hand cycle, jog around a track with a prosthetic left leg and power lift. He also took up skiing when a group of amputees went on ski outings to Colorado and New Mexico with the U.S. Paralympics and Disabled Sports U.S.A.

"It's so different now that I'm missing a limb," said Clemons of his athletic pursuits. Participating in the adaptive-sports therapy programs, Clemons is finding new sporting opportunities that he hadn't tried before losing his leg.

"It has allowed me to do a lot of things that I haven't done before," he said, adding that "actually, the good outweighs the bad." The way Clemons sees it, athletic competition is a good thing, because an athlete can compete throughout a lifetime. "We even compete with ourselves," said Clemons. "Some days it's pretty challenging just to get up. Playing these sports allows you to put stuff in perspective and just move forward in life."

Determination and Optimism

As Clemons and the other 92 amputee service members are finding out at the amputee-care center, recovering from a limb-loss is a full-time job requiring, grit, determination and optimism.

To facilitate the recovery of service members like Clemons, the center has more than 100 employees and boasts a 2,500-square-foot training gym with state-of-the-art exercise and rehabilitation equipment.

Mike Dulevitz

SPC Albert Ross — injured by a rocket-propelled grenade in Baghdad in August 2004 — puts his flex-run prosthesis to the test for the first time on the BAMC track.

Patient care at BAMC starts with surgical treatment to maximize a Soldier's performance, said COL Mark Bagg, orthopedic consultant to the Army and chief of orthopedics and rehabilitation at BAMC.

"Amputation, rather than being considered a treatment failure, is viewed by our staff as one of the treatment options aimed at maximizing the Soldier's rehabilitation potential," Bagg said.

Soldiers are fitted with three separate prostheses:

Andricka Hammonds

SGT Juan Arredondo takes a ride on one of the 1st Cavalry Horse Detachment's mounts at Fort Hood, Texas. Arredondo lost a hand and sustained wounds to both legs in an IED explosion in Iraq.

a myoelectric one, a body-powered one, and one or more passive devices that can be sports specific or cosmetic. The center features a fully furnished apartment where normal activities of daily living are mastered through weekly multidisciplinary clinics.

"Opening drawers, pulling laundry out of the washer and dryer, pouring a drink, turning the stove on and off, and getting safely in and out of a shower are just a few of the activities that must be relearned," Bagg said.

Activities targeted at reintegrating Soldiers back into an active lifestyle include a therapeutic pool to help with rehabilitation, horseback riding, mountain biking, skeet shooting, scuba diving, skiing and snowboarding.

In addition to serving the amputees, the center also doubles as a place of research. The center focuses on how it can better serve the amputees, to enhance both their physical and emotional states.

The Very Best Care

A Soldier who has lost a limb in combat leaves an indelible image of his sacrifice in the service to his country, Bagg said. "We owe him the very best care."

BAMC has treated more than 2,300 service members injured in the war on terrorism, including 92 who have had limbs amputated as a result of their injuries.

BAMC was selected as the second amputee-care site because it is a level-1 trauma center and an accredited American Burn Association treatment center.

Together, the Walter Reed Amputee Care Center and BAMC's center provide service members with amputations the best possible care, which allows many of them to return to active duty.

Army Vice Chief of Staff GEN Richard Cody said the opening of the center represents an important part of living the warrior ethos; it says, "We'll never leave our fallen comrades behind."

Intrepid

WOUNDED service members and military leaders broke ground last fall at Brooke Army Medical Center in San Antonio, Texas, for what is to be the nation's premier rehabilitation center for amputees — the Center for the Intrepid.

The $40-million facility was made possible by the Intrepid Fallen Heroes Fund. It includes two new 21-bedroom Fisher houses.

Arnold Fisher, the honorary chairman of the Intrepid Fallen Heroes Fund, and his son, Ken Fisher, the chairman of the Fisher House Foundation, participated in the groundbreaking, along with Army Vice Chief of Staff GEN Richard Cody, Army Surgeon General LTG Kevin Kiley and BAMC Commander BG James Gilman.

The Intrepid Fallen Heroes Fund and its sister organization, the Fisher House Foundation, are nonprofit organizations dedicated to supporting the men and women of the U.S. armed forces and their families.

"I know what these kids have given up, and I know we need to stand behind them and we need them to know that we stand behind them," Fisher said, adding that their esprit de corps, love of country and excitement about getting back to their units were inspirational.

The Fishers said that the Army's surgeon general assisted them in making the National Armed Forces Rehabilitation Center a reality by getting the Department of Defense to give the project a green light. Arnold Fisher said the gift to the military from the foundations was not charity; it was something America owes the military.

The Fisher House Foundation currently operates 33 Fisher Houses at military installations and at Department of Veterans Affairs hospitals. The foundation currently has six houses under construction. The houses offer a sort of "psychological" first aid for the wounded, providing a stress-free living environment and peer support during the service member's recovery period.

Ken said the two 21-bedroom houses to be built at BAMC would cost about $5.1 million and would support the work of the Center for the Intrepid. The houses will be the largest ever built by the foundation and will triple the capacity of the existing Fisher houses at BAMC.

A wounded Soldier who told Ken he wished he could have his entire family with him as he recovered was the inspiration for the expansion of the BAMC Fisher houses.

The facilities have consistently been filled to capacity, as more than 2,000 wounded service members have come to the hospital for care.

"This is about supporting these young men and women," Ken said. "It's important to show them this country supports them and doesn't take them for granted."

The rehabilitation center and lodging complex are to be completed by January 2007. The Center for the Intrepid will serve veterans and military patients injured in the war on terrorism. Many of the patients have lost limbs. The new 65,000-square-foot center will provide them a pool, an indoor running track and a two-story climbing wall.

Space for clinical research to improve prosthetic designs has been designed into the structure. A computer-assisted rehabilitation environment — which will include 12 cameras and a 300-degree screen — will allow amputees to navigate through various "virtual" environments.

The pool, located on the ground floor, will be used for water sports and will help amputees prepare for the prosthetic running program.

A flowrider, located next to the pool, will allow patients to ride the surf while improving balance, coordination, strength, motivation and confidence.

A fourth-floor running track with three running lanes overlooks the physical-therapy gym, while the climbing tower will promote agility and aerobic conditioning.

New Hope for Amputees

Story by Janice Arenofsky

VA photo

With a prosthetic right foot, CPT David Rozelle makes his way down a mountain at Snowmass Village, Colo. New types of prostheses allow amputees to perform a wide range of activities.

WHEN Darth Vader chops off Luke Skywalker's hand in the movie "The Empire Strikes Back," Star Wars' favorite hero helps himself to a robotic prosthesis and proceeds on his merry way.

Thanks to technology, this sci-fi scenario is closer to reality than many people realize, said Dr. Roy Aaron, an orthopedic surgeon and director of the Center for Restorative and Regenerative Medicine at the Veterans Affairs Medical Center in Providence, R.I.

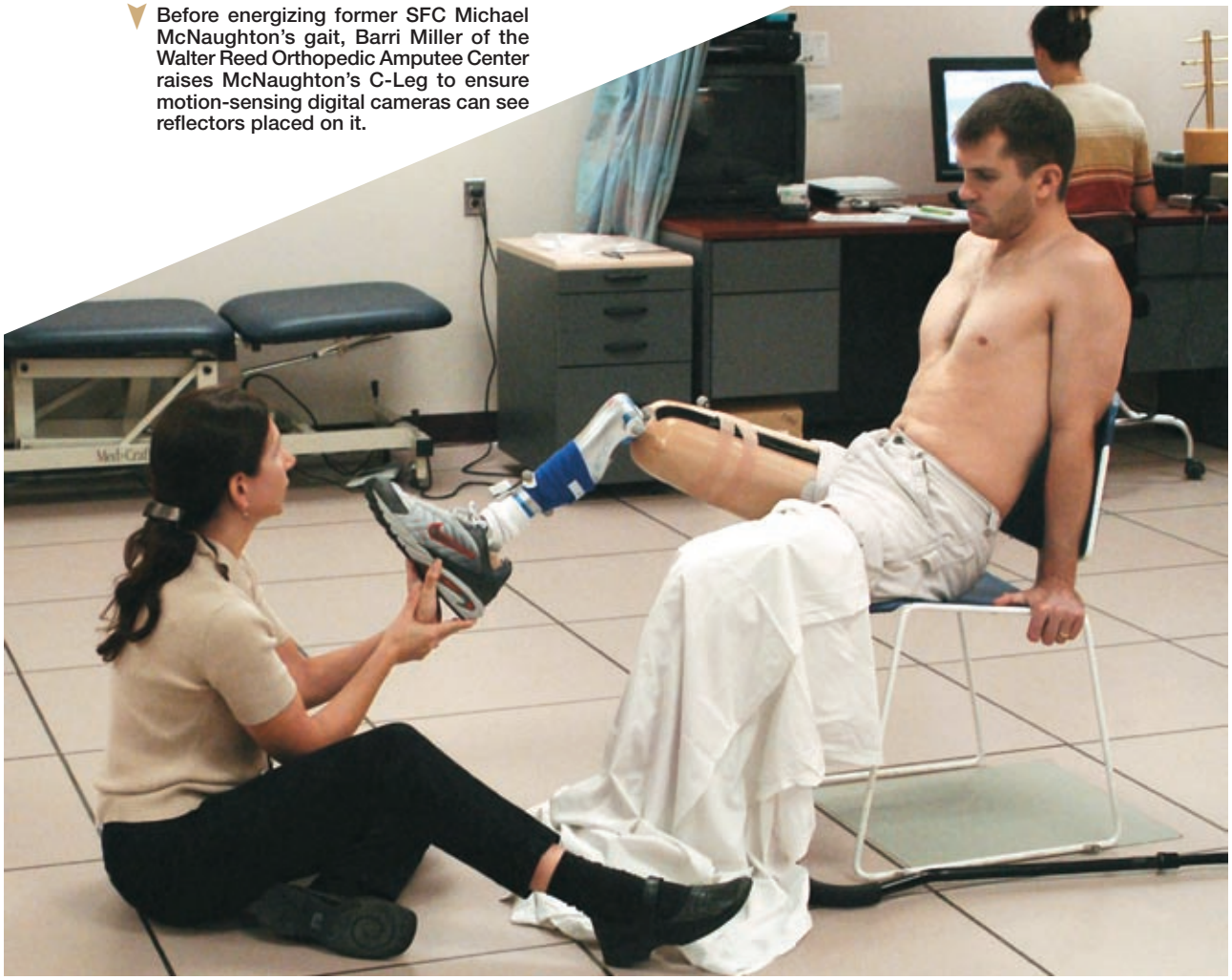
Aaron predicts that bio-hybrid limbs will be commercially available within three years, and that lifelike prostheses with a neural interface will soon follow.

Aaron's confidence in innovative technology stems from two sources: healthy competition within the biomedical field itself, and the creativity and genius of researchers at the VA center in Providence.

"It's our hope and intention to transfer our discoveries into clinical settings to benefit war amputees," he said.

Aaron said the Providence center is "an intimately integrated program" employing 20 major investigators from a mix of disciplines, including psychology, engineering, robotics and medicine. The "discoveries" encompass limb lengthening, tissue engineering, osseointegration (for example, attaching a titanium bolt to a residual limb) and implantable sensors that allow the recipient's nerves and brain to move the prosthesis.

Janice Arenofsky is a freelance writer based out of Scottsdale, Ariz.



Michael E. Dukes

Before energizing former SFC Michael McNaughton's gait, Barri Miller of the Walter Reed Orthopedic Amputee Center raises McNaughton's C-Leg to ensure motion-sensing digital cameras can see reflectors placed on it.

New Amputees

Brent Bretz knows how arduous recovery can be. The 23-year-old former sergeant from Mesa, Ariz., lost both legs when his truck hit a land mine near Mosul, Iraq, last year. Since then he has had 40 surgeries and awaits more before he can be fitted for prostheses.

"The surgeries are painful," he said. Not yet ready to discuss walking again, Bretz said most of his fellow amputees are "satisfied" with their prostheses.

Mike McNaughton is one of those satisfied former Soldiers. Wounded by a land mine in Afghanistan in January 2003, he endured 11 operations to clear up infections, remove bone spurs and reshape bone on his above-the-knee leg amputation.

McNaughton was one of the first amputee-vets to receive a computerized C-leg. With its microprocessor and sensors, the leg can adjust for flexibility and speed as many as 50 times a second.

Like many amputees in rehab, McNaughton enjoyed athletics before his injury and quickly outgrew his C-leg because, he said, "The C-leg couldn't keep up with me."

He now wears the "Rheo Knee," invented by Dr. Hugh Herr, professor of biomechatronics at the Massachusetts Institute of Technology, a staff member at the VA center in Providence and an amputee himself. Herr's device is the first artificial-intelligence knee system.

Ted Gaskins

McNaughton, seen here with a different type of prosthesis, was one of five Army amputees to run the Bataan Death March Memorial Race at White Sands Missile Range, N.M.

SGT Lorie Jewell

Walter Reed research prosthetist Joe Miller cleans up a foam mold for a prosthetic socket after it was machine carved.

Its microprocessor can respond to sensory data as many as 1,000 times a second, and the system uses magnetic forces to make movement more natural.

It took just five minutes for McNaughton to adjust to the Rheo. "It adjusts to any speed and prevents a stiff-legged free stance and the fear of falling. I'm actually more active now than before the amputation." He runs marathons and hopes to compete in a triathlon. Today, he works for the Department of Homeland Security's Emergency Preparedness division in Baton Rouge, La.

Testing New Devices

Advances in body armor have affected the types of injuries Soldiers suffer, and spurred changes to the medical industry and rehabilitative process.

"It's a whole new paradigm," said Dr. Michael Ehrlich, a 30-year veteran of limb-lengthening research and head of orthopedics at Brown University Medical School. "These are young men with devastating wounds. We're forced to learn quickly — to go from basically barbaric to high-tech devices."

McNaughton is now interested in Herr's ankle-foot device, which is currently in development and will use artificial muscle made of electroactive polymers to help amputees climb stairs.

Herr plans to develop a new generation of robotic knees and ankles that are powered by artificial muscles and controlled by the brain and nerve signals. To do this, he will inject a wireless microchip into the residual leg muscle. The chip will pick up nerve signals instructing the prosthesis to move.

Not everyone, however, will want or qualify for these high-tech devices. Every veteran's personality and needs are unique, Aaron said.

Take former SPC Kevin Pannell, transformed in seconds into a double amputee after two hand grenades exploded in front of him in Baghdad in June 2004. Pannell has kept a positive attitude since day one. "I have yet to find anything I can't do now," said Pannell.

And the "crazier-looking" the prosthesis is, the happier he is. In fact, he rarely uses his C-leg, favoring a hydraulic system for kayaking, hunting, snowboarding and other sports.

Changing the World

Though he tries not to paint an unrealistic picture of prosthetic innovations, Aaron said robotic devices and neural interfaces are "a lot closer to reality than people think."

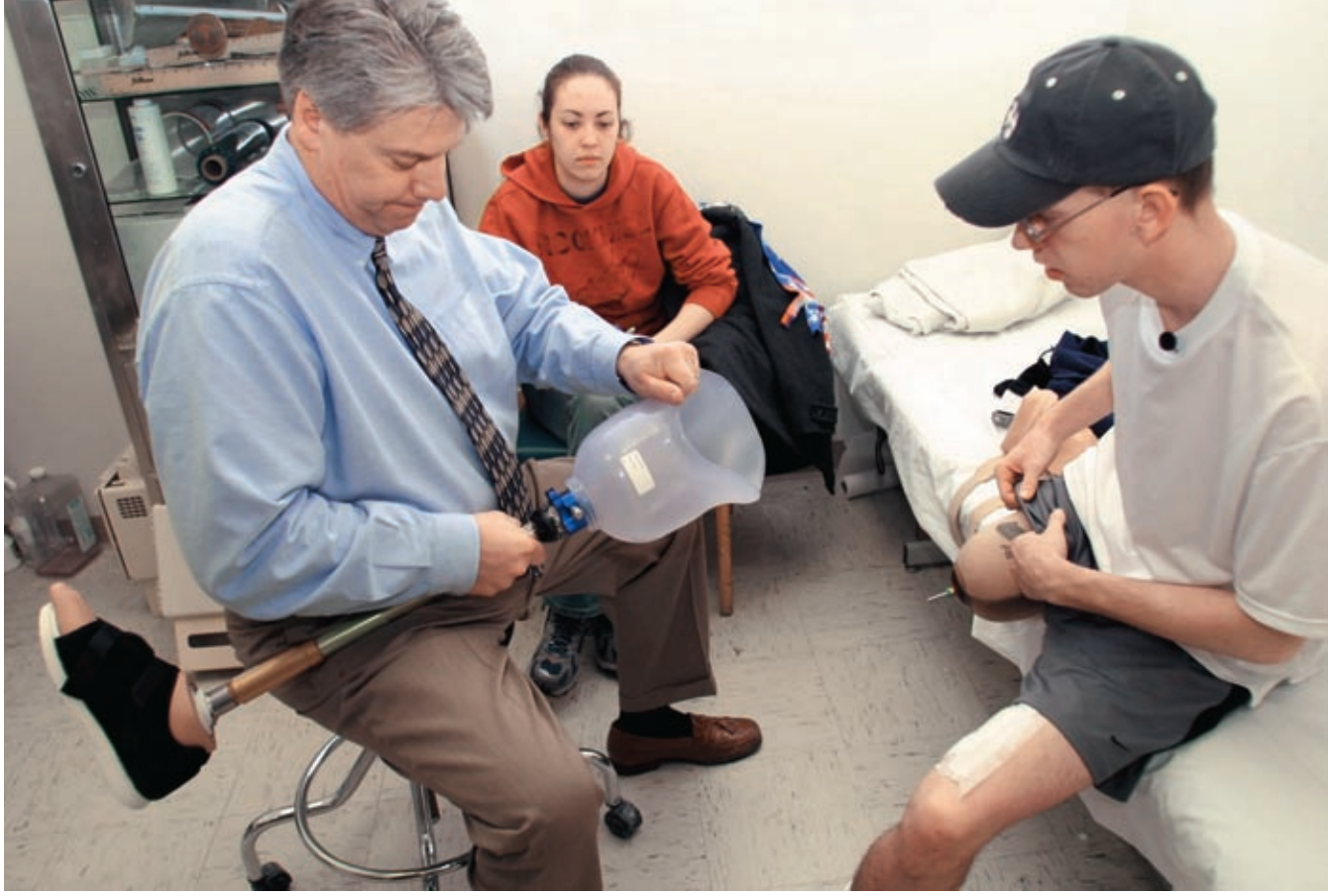
Recently, Brown University neuroscientist Dr. John Donoghue achieved a significant goal with "BrainGate," which in 2003 was named by MIT Technology Review as one of the top 10 emerging technologies that will change the world.

The Food and Drug Administration authorized Donoghue to implant a small sensor with 100 microelectrodes into the brains of two quadriplegics. The sensor sends signals through the brain, via cable, to a computer that transmits data into movement commands.

"We just completed a year's trial with one patient and we're very pleased," Donoghue said. The patient uses his

A Soldier demonstrates how the advent of advanced technology in prosthetics makes it possible for amputees to perform a range of once-impossible activities.

SGT Lorie Jewell



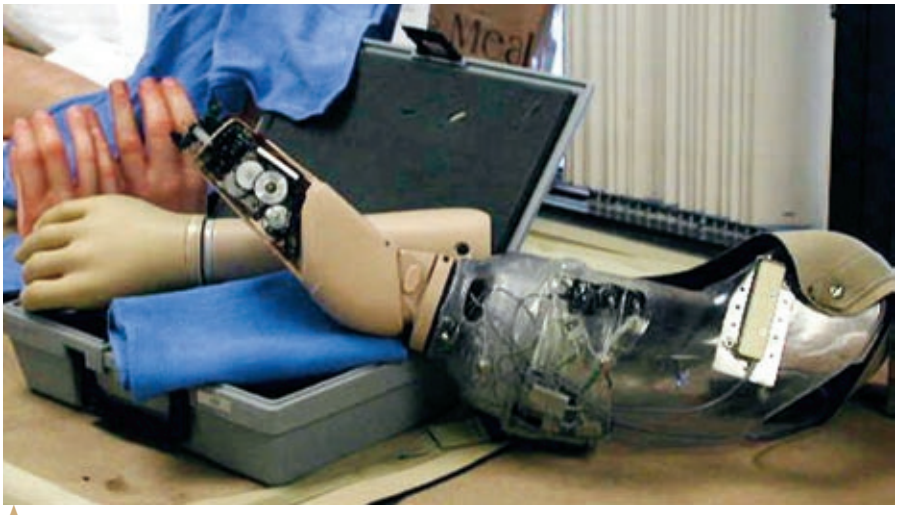
SPC Sean Lewis and his wife, Jessica, watch as Walter Reed prosthetist Dennis Clark adjusts the socket of Lewis' new prosthetic leg. It was the first time Lewis had donned the new limb.

personal computer to pick up e-mail, turn off lights, answer the phone and do other routine tasks.

Donoghue hopes to eventually use the same system, but in wireless form, with amputees. He's also closely watching the ongoing development of lifelike prosthetics with sensory capabilities.

"So far, our artificial arms are not that impressive," Donoghue said. "Muscle is a strong material and replicating it is a complex engineering task."

"The most advanced technology will take the longest to perfect," he added. The first clinical trials using a neural interface, about three years away, will focus on upper-body control and will target prosthetic hands.



Filled with a variety of innovative electrical components, the myoelectric arm gives wearers a greater range of movement and more comfort.

Increased Demand

Neither McNaughton nor Pannell are completely sold on brain implants, due to the devices' invasiveness, but both amputees want to benefit from the newest medical technologies.

"The last 10 years have seen amazing things," Pannell said. "Cosmetic coverage is so realistic, it's spooky."

But next-generation prostheses will not be cheap. A current prosthesis can cost as much as $80,000. According to the O&P Edge, a prosthetics publication, the number of patients seeking VA prosthetic services has increased by about 30 percent in the last four years.

Will the VA be able to keep up with rising costs? Last year, it provided 176 veterans with state-of-the-art C-Legs. The department also operates 63 prosthetic labs staffed by 97 board-certified prosthetists.

VA's proposed 2006 budget for prostheses is $100 million more than last year's. The new Providence VA Medical Center will use some of those dollars to ensure "no one is left behind," said Ehrlich.

The F

Story and Photos by Heike Hasenauer

Soldiers of the 67th CSH hone their field-medical skills during a training exercise near their home station in Würzburg, Germany.

rontline of Care

I'VE seen a lot of death in my lifetime. A lot of infantrymen don't see the level of death that Soldiers in a combat support hospital see," said CPT Jerry Starr, the 67th CSH's company commander in Würzburg, Germany.

The CSH structure differs from that of most Army units, Starr said. Most battalions have five companies: a headquarters company and four others. The 67th CSH is a battalion-sized

Dr. (MAJ) Edward Vanisky, an oral surgeon with the 67th CSH, removes stitches from one of his patients during the exercise.

CSHs typically operate as 84-bed, highly mobile facilities.

"We have the capability to medically support a corps-level community," said Bither of the CSH tent setup that includes living areas for the hospital staff, a tactical-operations center and the hospital.

A combat support hospital is what's called an "echelon three" facility, Starr said.

"We have a blood lab and can perform surgery. Part of the facility is mobile, the other has a holding capability. A lot of thought has to go into setting it up, to ensure patients can be moved easily and appropriately," he said.

Medical Support in Combat

The CSH entered Iraq in February 2004 with the 1st Infantry Division, Starr said, and also supported the 2nd Inf. Div. and a Reserve division from New York.

"We provided medical care to U.S. and coalition troops, as well as Iraqi soldiers and detainees and, in life-or-death situations, to Iraqi civilians as well," he said.

The unit was split into three groups — one at Abu Ghraib prison outside Baghdad, and the others at Mosul and Tikrit air bases.

The 67th's work at Abu Ghraib has been lauded because of the many positive medical initiatives and practices begun by its Soldiers.

For example, they spent five weeks transforming an old warehouse into a hospital for detainees. And the first inpatient was admitted in March.

As general-care providers, Soldiers of the 67th CSH treated detainees with diabetes, heart problems and missing limbs, said SSG Christopher Williams.

"Sick-call personnel and dentists probably worked hardest," he said. "And some of the detainees probably

element, but has only one company. COL Mark Bither, an Army Nurse Corps officer, is the battalion commander.

Starr, a registered nurse and former Navy hospital corpsman, was attached to the 1st Marine Division's 1st Tank Battalion during his first deployment to Iraq, in 2003. He deployed to Iraq again with the 67th CSH in January 2004 and redeployed to Germany in January 2005.

Dual-Mission Unit

Some 400 Soldiers compose the 67th CSH and make up a large portion of the clinical staff at the Würzburg Army Hospital. So when the unit deployed in January 2004, Reservists from the New York-based 348th General Hospital deployed to Würzburg to fill the 67th CSH members' positions on the hospital staff, Starr said.

When the CSH doctrine was developed 20 years ago, the CSH was a 296-bed hospital, said Bither. Today,

Orthopedic technician SGT Joseph Pereira fits CPT Jonathan Sinnott with a short-arm cast.

SSG Christopher Williams (*right foreground*), the 67th CSH's intensive-care unit ward master, gives a field-training class on ICU care to medics who may soon be headed for ICUs downrange.

had the best medical and dental care they've ever had in their lives.

SGM David Janney led the effort to "build" the hospital at Abu Ghraib when he arrived in February 2004, officials said. In one of his notes to family and friends in July 2004, he wrote about some of the unit's many accomplishments, including "developing and implementing the first mass-casualty standard-operating procedures."

The unit also developed and implemented SOPs for prevention of detainee abuse and sexual assault, established sanitation measures and initiated a thorough preventive-medicine survey of the prison complex, officials said.

Additionally, the 67th CSH and other supporting units were credited with recommending a separate detainee amputee compound be established, to prevent prisoner-to-prisoner abuse; making available prosthetic limbs for detainee amputees, through a local Iraqi prosthetist; introducing a compassionate-release program for the chronically ill; and introducing combat-stress control assets to the facility, to help U.S. Soldiers working there cope.

> "When we arrived, there was only a battalion aid station providing care for the 7,000 prisoners. We were asked to set up a hospital."

"Our commander said: 'You don't have to like the detainees, but you have to treat them with dignity and respect, because they will go out and tell other Iraqis that Americans cared for them,'" said Williams.

Caring for Detainees

"When we arrived, there was only a battalion aid station providing care for the 7,000 prisoners," he said. "We were asked to set up a hospital"

Soldiers from the CSH joined forces with members of the 1st Forward Surgical Team. The collective, 80-person CSH then set up its hospital inside a warehouse.

"We made the news in April when two showers of mortar rounds landed in the prison camp and injured more than 100 detainees," Williams said. Nine prisoners died and 20 were evacuated for higher-level care. Many others were treated by the Soldiers at Abu Ghraib.

"Our folks, with the help of medical personnel from four different units, cared for them with spirit and grace," Williams said.

"Typical" Days

"Elsewhere in theater we sometimes saw as many as 15 casualties a day, because the insurgents had started using improvised explosive devices," Starr said.

MAJ Bill Hinze, emergency medical technician head nurse, was in Mosul at Forward-Operating Base Diamondback.

"Ninety percent of our casualties were from IEDS, the rest were from sniper fire," Hinze said. "We never

CPT Jerry Starr welcomes a good hot meal served by some of what he and other unit members consider to be the best cooks in the Army.

Würzburg Army Hospital is the 67th CSH's home when the unit is not deployed to Iraq, Afghanistan or humanitarian-relief missions in places such as Pakistan.

knew what we were going to get. We'd get a call alerting us that two casualties would be arriving and we actually received 10. Or we'd get a call that 10 would be arriving and we got two."

Dining Facility Blast

Soldiers from the CSH were among medical personnel who worked frantically to keep Soldiers alive following the December 2004 suicide bombing of the U.S. dining facility at FOB Marez, in southwest Mosul.

"We received 91 patients and 22 dead," Hinze said.

"It's a day I'll never forget," added SFC Glenn Newby, who was NCOIC of the 67th CSH's emergency room in Mosul. "Most people were preparing for Christmas. We saw so many casualties. I can still see the faces of the wounded.

"I had 26 people in the emergency room, and most of the Soldiers in the CSH who were caring for them were straight out of advanced individual training," Newby said. "Up until then, many of them hadn't seen anything worse than an infected toenail."

Caring for Emotional Wounds

The CSH not only provides care for the physical wounds of war, but for the emotional wounds as well. Chaplain (CPT) Rich Way, one of two chaplains assigned to the 67th CSH, said the Army's trying to get more Soldiers to confront psychological wounds of war.

"If someone has an open physical wound, we respond immediately to care for it. Not so with psychological wounds," he said.

The Army's working to correct this through what's called "critical-incident debriefings" downrange.

"After a mass-casualty event, we bring everyone together to let them talk about what they saw and felt," Way said. "But it's not a magic wand by any stretch of the imagination; post-traumatic stress can affect for years to come Soldiers who have witnessed the horrors of war."

Honing Combat Skills

Recently, the unit underwent weeklong training in a field near Würzburg. Because more than one-third of the 67th CSH's Soldiers are new to the unit, and every one of them can expect to deploy to the OEF or OIF theater, the exercise focused on individual Soldier skills and setting up and tearing down the combat support hospital, Bither said.

67th Forward Surgical Team

Twenty Soldiers from the 67th FST in Würzburg trained with the CSH in preparation for the FST's October 2005 deployment to Iraq.

The FST provides life-sustaining surgery to allow patients to be evacuated to a higher level of care, said the unit's commander, LTC Donna Lupien, a nurse anesthetist. "We go forward in support of brigade-sized units wherever they need us. And we can set up a medical facility in one hour. If we are not needed forward, we can fall back to the CSH."

Additionally, the FST can operate without resupply for 72 hours and can handle as many as 30 surgical patients during that time, she said.

The CSH and FST are critical medical assets in a combat theater, providing immediate care to the wounded to start them on the road to recovery, Bither said.

CRSC Now Available

The Combat-Related Special Compensation program provides monthly compensation to military retirees with combat-related disabilities. The tax-free benefit supplements retired pay.

1

To be eligible for CRSC, applicants must:

- have served 20 years of active or reserve duty;
- be age 60 or older;
- be on retired status;
- be entitled to retired pay offset by Department of Veterans Affairs disability payments (VA Waiver); and
- have at least a 10 percent disability rating.

2

Combat-related disabilities for which applicants seek compensation must have been incurred:

- in the performance of duty under conditions simulating war (e.g. exercises, field training);
- while engaged in hazardous service (e.g. flight, diving, parachute duty);
- through an instrumentality of war (e.g. combat vehicles, weapons, Agent Orange); or
- as a direct result of armed conflict.

3

Documentation of combat-related injuries must be included with the application. Supporting documents should show a direct link between the disability claimed and how it was incurred in a combat scenario. According to CRSC analysts, the main reason for disapproval of applications is a lack of supporting documentation. Documents to include are:

- DD-214/DD-15;
- VA rating decisions, VA physician reports and VA medical records;
- award certificates;
- military medical treatment facility records; and
- military orders.

4

Retirees who have **lost** or no longer have **medical records** should contact a VA hospital or military treatment facility. After providing current medical information, personnel records and a signed statement of how the injury occurred, a doctor can provide a written medical consultation for inclusion in the CRSC claim.

5

Retirees who were hospitalized for disabilities may obtain records by writing to the following address:

Patient Administration Systems
& Biostatistics Activity (PASBA)
ATTN: Ms. Terri Amrhein, Analysis
1216 Stanley Road, Suite 25
Fort Sam Houston, TX 78234

or by calling (210) 295-8938.

6

To obtain combat documents, write to:

U.S. Armed Forces Center for Research of Unit Records (USAFCRUR)
7779 Ciena Rd.
Springfield, VA 22150

or call (703) 428-6801.

7

For personnel or military medical records, write to:

The National Personnel Records Center (NPRC-MPR),
9700 Page Avenue,
St. Louis, MO 63132-5100,

visit **www.archives.gov/st-louis/military-personnel**
or call (314) 801-0800.
Also visit the National Archives Records Agency at **www.archives.gov/research** or call (866) 272-6272.

8

To contact your local VA office, call (800) 827-1000 or go to **https://www.vba.va.gov/benefits/address.htm** or **www.visn1.med.va.gov/facilities/directory.htm.**

9

CRSC **claim forms** are available at **www.crsc.army.mil** and can be completed electronically. Applicants may also call the CRSC Service Center at (866) 281-3254 to request a claim form by mail. **Applications should be mailed to:**

Department of the Army
U.S. Army Physical Disabilities Agency,
Combat Related Special Compensation,
200 Stovall Street
Alexandria, VA 22332-0470

Want more information?

Go to **www.crsc.army.mil** or call the CRSC Service Center at (866) 281-3254.

R&R in Garmisch

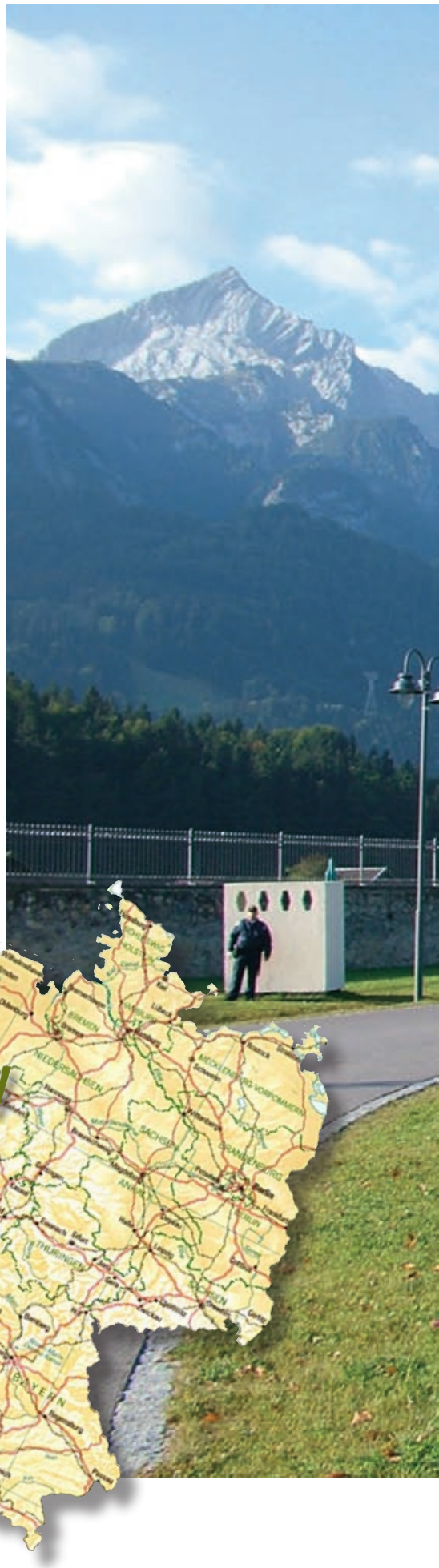
Story and Photos by Heike Hasenauer

Through the Community and Family Support Center's Armed Forces Recreation Centers' rest-and-recuperation programs, Soldiers who have witnessed death and suffering and have lived with the daily threat of attacks by insurgents can find comfort, security and the perfect setting for family reunions.

In Garmisch, Germany, the Edelweiss Lodge and Resort, located at the foot of the Bavarian Alps, offers special vacation packages for service members on R&R leave from operations Enduring Freedom and Iraqi Freedom, as well as from duty in the Balkans.

Block-leave programs for Soldiers who have recently returned from combat operations with leave remaining are also eligible for special programs, said resort spokesman Brad Hays.

Through the R&R program, a single Soldier can stay for two nights and enjoy two dinners and two breakfasts for as little as $90, Hays said. A couple can take advantage of the same package for $120. A third overnight costs only $45 for one person, $60 for two. The cost for youths ages 13 to 17 is only $9 per day, and children 12 and under stay and dine at the hotel free.



Visitors to the Edelweiss Lodge and Resort in beautiful Garmisch, Germany, are greeted by the towering Bavarian Alps.


EDELWEISS
LODGE and RESORT

The inviting lodge atrium area is a place where guests can simply relax and chat with friends while they sit in comfortable leather sofas and chairs or sit in rocking chairs by a rustic fire.

The resort, which opened in September 2004, offers many tours and recreational options through the resort's Alpine Adventures center. Activities range from skiing or snowboarding classes to excursions and hiking. The resort's Alpine Adventures tour program provides excursions to some of the most beautiful and historic sites in Europe, including the famed Neuschwanstein and Linderhof castles and the city of Munich.

SGT Jasen Wells, a Texas National Guard Soldier with the 56th Brigade Combat Team, recently spent time at the resort with his brother, who's also in the unit.

"We've been in the Sunni Triangle area in Iraq," said Wells. "It's very intense. Every day we're out, we find roadside bombs."

SPC Trenton Tafolla, a member of the Iowa Army National Guard's 224th Engineer Battalion, was also recently at the resort. Tafolla had been on active duty for two years when he took the R&R time off.

"This is the first break for us in nine months," Tafolla said of himself and Wells.

Soldiers deployed downrange draw numbers for leave priority after they're in the combat theater for at least three months.

Soldiers can stay at the resort — at a place that offers them everything they need — and enjoy the beauty of the Alps and southern Germany's charm and hospitality at the same time, Tafolla said.

The R&R program in Germany, which started in October 2003 at the former AFRC-Garmisch facilities (until the Edelweiss Lodge and Resort opened) had through October

The on-site fitness center allows guests to work out on state-of-the-art exercise equipment. They can also tune in to one of several wide-screen TV programs via personal headsets.

> The resort's staff is trained to be keenly aware of what Soldiers and their families who come to the resort may have experienced...

2005 hosted some 35,000 people, said Richard LeBrun, the resort's general manager. In October more than 800 guests — many of them on R&R — had been transported by bus to the Oktoberfest in Munich.

LeBrun, who's worked for AFRC for 18 years, is largely responsible for the design and construction of the Edelweiss Lodge and Resort.

"I view a resort as something more than simply a building. A resort has a feeling, a message, a purpose," LeBrun said. "I wanted both the building and the staff to radiate compassion for the people who come here."

LeBrun said he wanted visitors to feel as if the resort's employees had "their arms wrapped around them."

The resort "allows families to spend private, quiet, relaxing time or action-packed time together," he added.

Many families want to do things that allow them to bond but that can be done quickly and together, such as take a horse-and-buggy ride, participate in a guided hike or rent bicycles. "We see lots of parents in the video arcade with their kids, too," LeBrun said.

The resort s tranquil outdoor hot tub boasts breathtaking views of the Bavarian Alps.

Besides offering many on-site amenities, adventure programs and tours, LeBrun said "safety and security is of the utmost importance. The Garmisch resort looks and feels like a resort, but it's protected like an embassy."

Other selling points for Soldiers on R&R from combat, and for their families, is the fact that "other Soldiers around them are in the same boat," LeBrun said. "If a child is misbehaving, another couple won't stare disconcertingly at that child. They'll go over and pick the child up."

The resort's staff is trained to be keenly aware of what Soldiers and their families who come to the resort may have experienced or are working through.

Since the R&R program began, an active-duty and Reserve chaplain have been assigned to the resort, LeBrun said. They've interacted with the staff to provide sensitivity training, to make them aware of the types of stresses the Soldiers who come here have experienced.

"We use some vignettes to teach our staff to be attuned to people's emotions," LeBrun said. As examples, "we had a guest who was on one of the treadmills, watching CNN, when he learned his first sergeant had been killed in Iraq. Another time, a woman contacted the reservation desk to cancel a reservation because her husband had been killed in an IED attack in Iraq.

"The chaplain we have now is an Operation Iraqi Freedom veteran," LeBrun said. "We haven't had an emergency that required a chaplain, but we've had dozens of opportunities for counseling."

One day a Soldier sat in the lobby at 1 a.m. crying. "If he had been at a commercial hotel, the staff may have assumed he was just young and had had too much to drink and ignored him," LeBrun said. "We had a chaplain in the lobby within 10 minutes to see if he could help our guest.

"Because most of our employees haven't been in the armed services — 85 percent come from the States, from colleges and universities where they study recreation management — they tell us this is their chance to serve their country," LeBrun said.

Employees are about the same age as the average guest, "so the employees have a great level of respect for the service members. And when an employee thinks he's had a tough day, the employee rethinks it."

For more information or to make a reservation, call the Vacation Planning Center at (DSN) 440-2575 or commercially, from the States, 011 49 8821-9440. From overseas locations, dial 08821-9440.

You can also access the Edelweiss Lodge and Resort via the Web at **www.edelweisslodgeandresort.com.**

Green to Gold

NEW ACTIVE DUTY OPTION

ENLISTED Soldiers can now attend college, earn degrees and become officers — all while serving on active duty.

The Green to Gold Active-Duty Option is a two-year scholarship program that allows Soldiers who meet certain time-in-service and age requirements to attend college for up to 24 months. Current pay and normal change-of-station benefits are included.

Participants are not eligible for Army tuition assistance, but they may use G.I. Bill benefits.

For applications and information, visit www.goarmy.com/rotc.

Travel

GOOD DEALS FOR SOLDIERS

PLAN now to get the best deals on summer getaways. From airline travel and rental cars to attraction tickets and hotels, merchants offer special packages and cheaper prices to military members. Find current specials and military discounts at militarytravel.com, armymwr.com and militarylife.com.

SRTV Radio

INTERVIEW: CRAIG MORGAN

Craig Morgan, country artist of such hit songs as "Almost Home" and "That's What I Love About Sunday," spoke with SGT Courtney Thomas last fall. What advice did the former Army Ranger have for Soldiers deployed around the world?

"Keep your head up and be proud of who you are and what you're doing. The men and women of the armed forces need to know that America supports them," he said.

Morgan served 10 years in the Army and deployed to the Middle East for Operation Desert Storm with the 82nd Airborne Division.

Go to **www.army.mil/srtv** and click on "Soldiers Radio Products" to listen to music and more interviews.

Health

TOOTHBRUSH OR GUM?

NO time to brush? Researchers are testing a new chewing gum that could be used by Soldiers in the field.

The gum would contain a special bacteria-fighting agent to prevent plaque, cavities and gum disease, according to the American Association of Pharmaceutical Scientists. Developers aim to ensure the gum retains its flavor and bacteria-fighting ability for up to an hour.

Education

EXTENDED BENEFITS FROM EARMYU

CHANGES in re-enlistment criteria broaden eligibility for the eArmyU laptop enrollment option and extend the program's no-laptop option to all officers.

"Soldiers have greater access and flexibility with the eArmyU program than they do with the traditional programs where they learn at a structured pace and sit in the classroom every Monday and Wednesday evening, at lunchtime or over the weekend," said Dian Stoskopf, director of the Army Continuing Education System.

Laptop enrollees must successfully complete at least 12 semester hours of coursework in three years. The number of Soldiers approved for the laptop enrollment will be limited based on program funding, officials said.

The eArmyU no-laptop enrollment, formerly called eCourse enrollment, is also now extended to all officers. With this option, Soldiers use their personal computers to participate in the program on a course-by-course basis and receive all the same benefits as laptop enrollees.

Tuition includes textbooks, an Internet-service provider, full-time technology support, a "boot camp" tutorial, and online academic tutoring and mentoring.

All active-component Soldiers who want to participate are required to have approval from their ACES counselor and commander. — *ARNEWS*

For more information, go to **www.eArmyU.com.**

JOBS!

TAKING CARE OF VETERANS

THE National Hire Veterans Committee has designed a Web site to help match qualified veterans and employers. Located at www.hirevetsfirst.gov, the site includes a "Veteran Zone" with links to job searches, one-stop career centers, a military skills translator and a resume writer.

Hire *VetsFirst*

According to the Web site, employees want Soldiers for these reasons:

- Accelerated learning curve
- Leadership
- Teamwork
- Diversity and inclusion in action
- Efficient performance under pressure
- Respect for procedures
- Technology and globalization
- Integrity
- Conscious of health and safety standards
- Triumph over adversity

Story by Elaine Wilson

The BIGGEST Loser

WHEN a recruiter stopped by Roderick Evans' home to talk to his son, it was the elder Evans who was the one sold on the military. A home health-care specialist in Detroit, Mich., Evans had a passion for helping others and a desire to make a difference. A military medical career sounded like a perfect fit.

The recruiter, on the other hand, saw a different picture. He took one look at Evans and said, "You're just too big."

At 5 feet, 7 inches and 418 pounds, Evans could hardly disagree. But instead of easing the rejection with his usual overdose of comfort foods, the self-proclaimed "Snickerholic" "went on a crusade."

Fueled by sheer willpower and a determination to join the military, the 36-year-old finally conquered a lifelong battle with his weight. Three years and 230 pounds lighter, Evans again saw a recruiter. This time, he was met with a much different reception.

"He had me come down to his office for a fitness test," said Evans, now 39 years old and 165 pounds. "I passed with flying colors and signed up for the Reserve on the spot."

As a 91W combat medic student at the Army Medical Department Center and School at Fort Sam Houston, Texas, Evans was a motivator for his fellow Soldiers, a role he never anticipated when growing up on the streets of Detroit.

"I never lost sight of my goal of joining the Army ... I never gave up."

"It was rough growing up," said Evans. "You had to either be the big guy so no one messed with you or you had to know how to fight. I was the big guy."

Evans had long been frustrated by his weight and physical condition. At 36, "I couldn't walk from the couch to the door without sitting down," he said. "But I didn't want to push back from the table."

It wasn't until the recruiter walked in that Evans pushed his plate away. He got up from the couch and started walking, then running. With smaller portions and a steady diet of gym trips, the weight flew off.

"I never lost sight of my goal of joining the Army," Evans said. "Even at 418 pounds, I never gave up. That's just who I am."

Evans still avoids Snickers bars and most sweets, and he doesn't give them a second thought. His primary focus is on his military future.

"I'm aiming for 20 years in the Army," he said. "It took me a long time to achieve this goal and I'm going to keep going until I can't."

Elaine Wilson is with the Fort Sam Houston Public Information Office.

WARRIOR ETHOS

I will always place the mission first
I will never accept defeat
I will never quit
I will never leave a fallen comrade

The Warrior Ethos is the common thread that has tied us all together throughout 230 years of service to our nation. Since 1775, American Soldiers have answered the call to duty. From Valley Forge to the battlefields of Gettysburg; from the Argonne Forest to the shores of Normandy; from the rice paddies of Korea and Vietnam to the mountains of Afghanistan and the streets of Baghdad; our military history is rich with the willingness of generation after generation to live by the Warrior Ethos.

Peter J. Schoomaker
General, United States Army
Chief of Staff

GIVES SOLDIERS THE STRENGTH TO ENDURE. BUT ONLY A CHAPLAIN CAN DO THE SAME FOR THEIR FAMILIES.

These are trying times. Not just for our Soldiers, but for their families as well. Husbands. Wives. Sons and daughters. They all need the nourishment that spiritual leadership can provide. Whether you're already ordained or still in seminary, there are opportunities for you to fill this role. Consider the call of a truly unique ministry.

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